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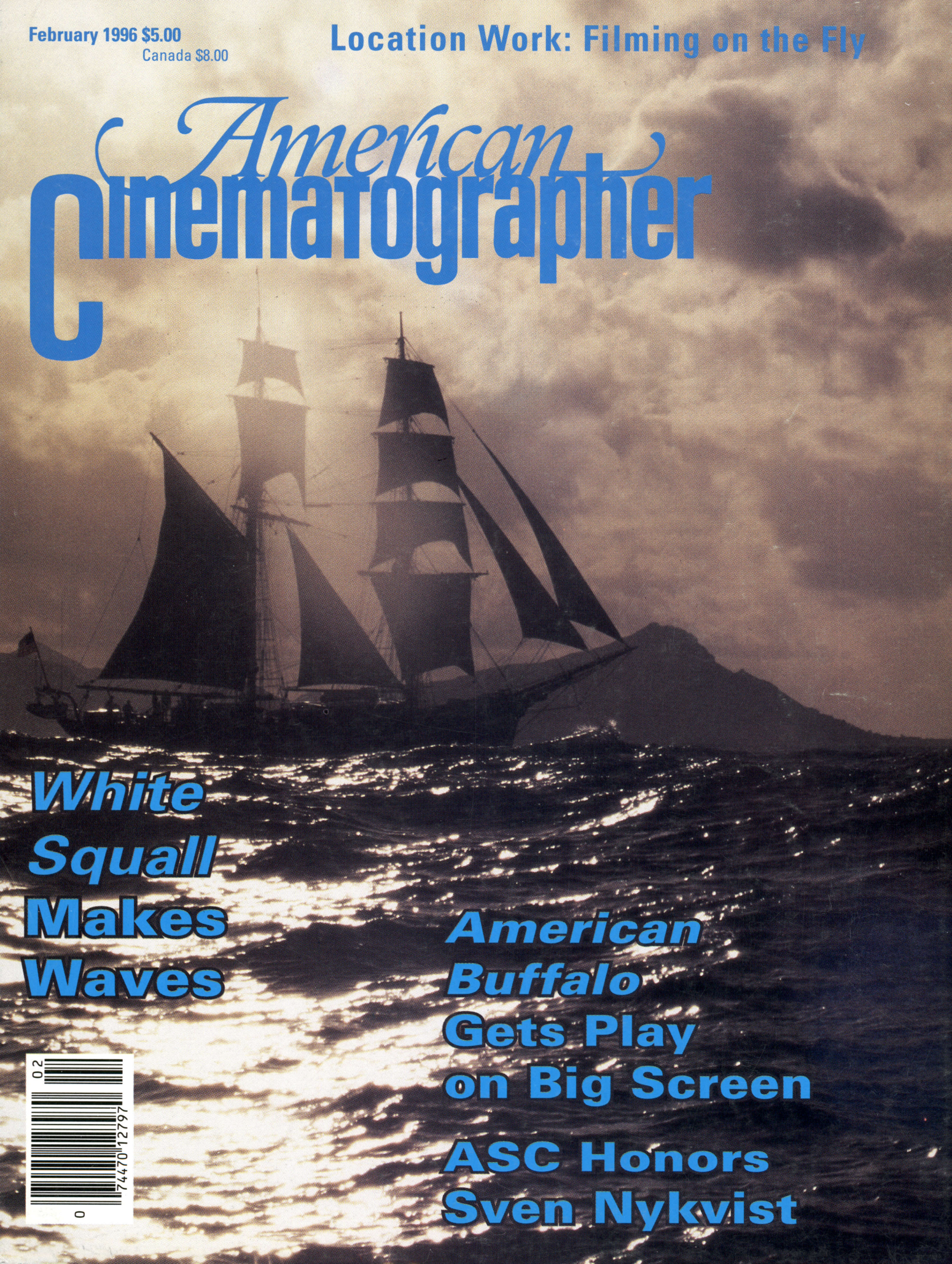
American Cinematographer



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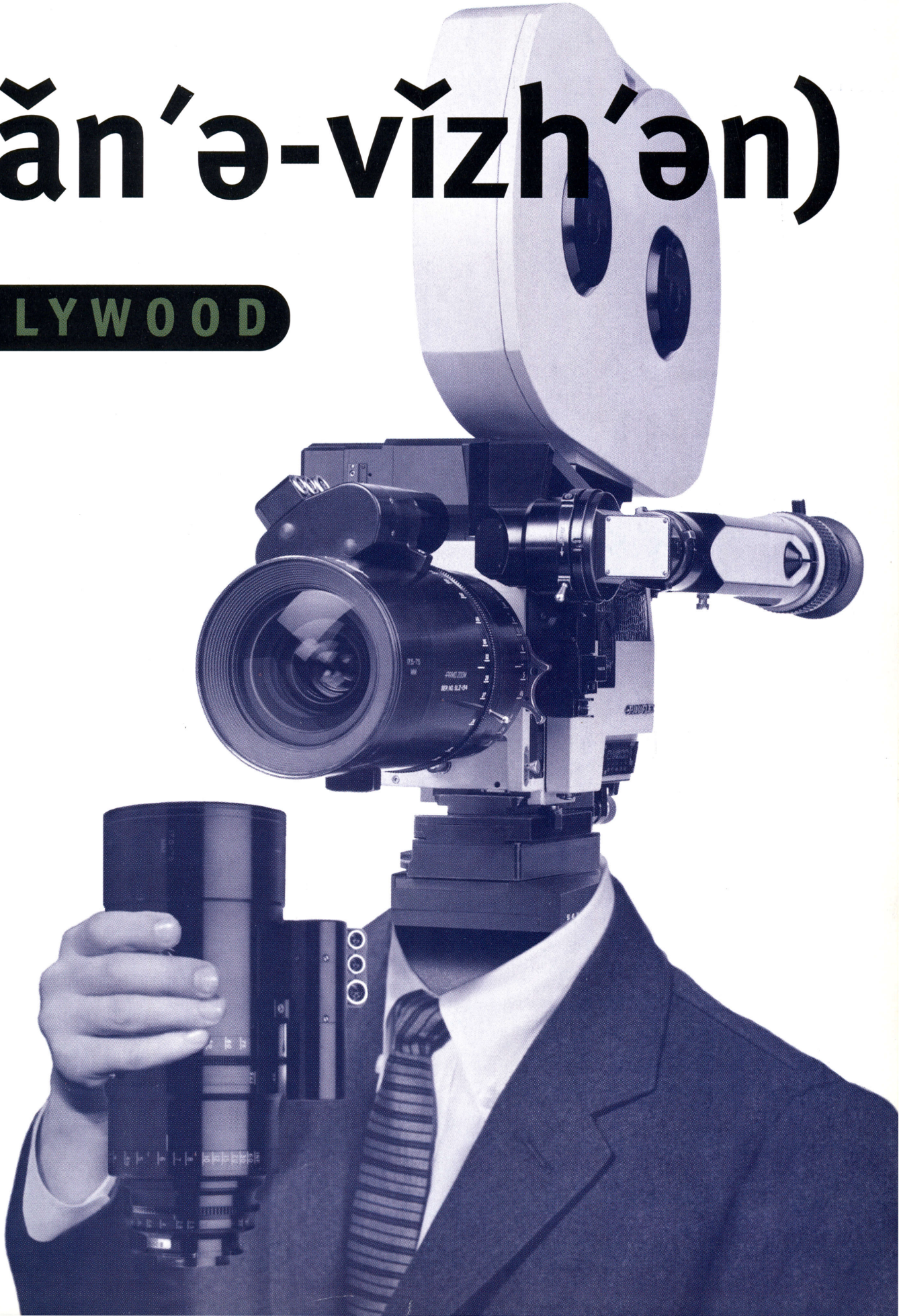

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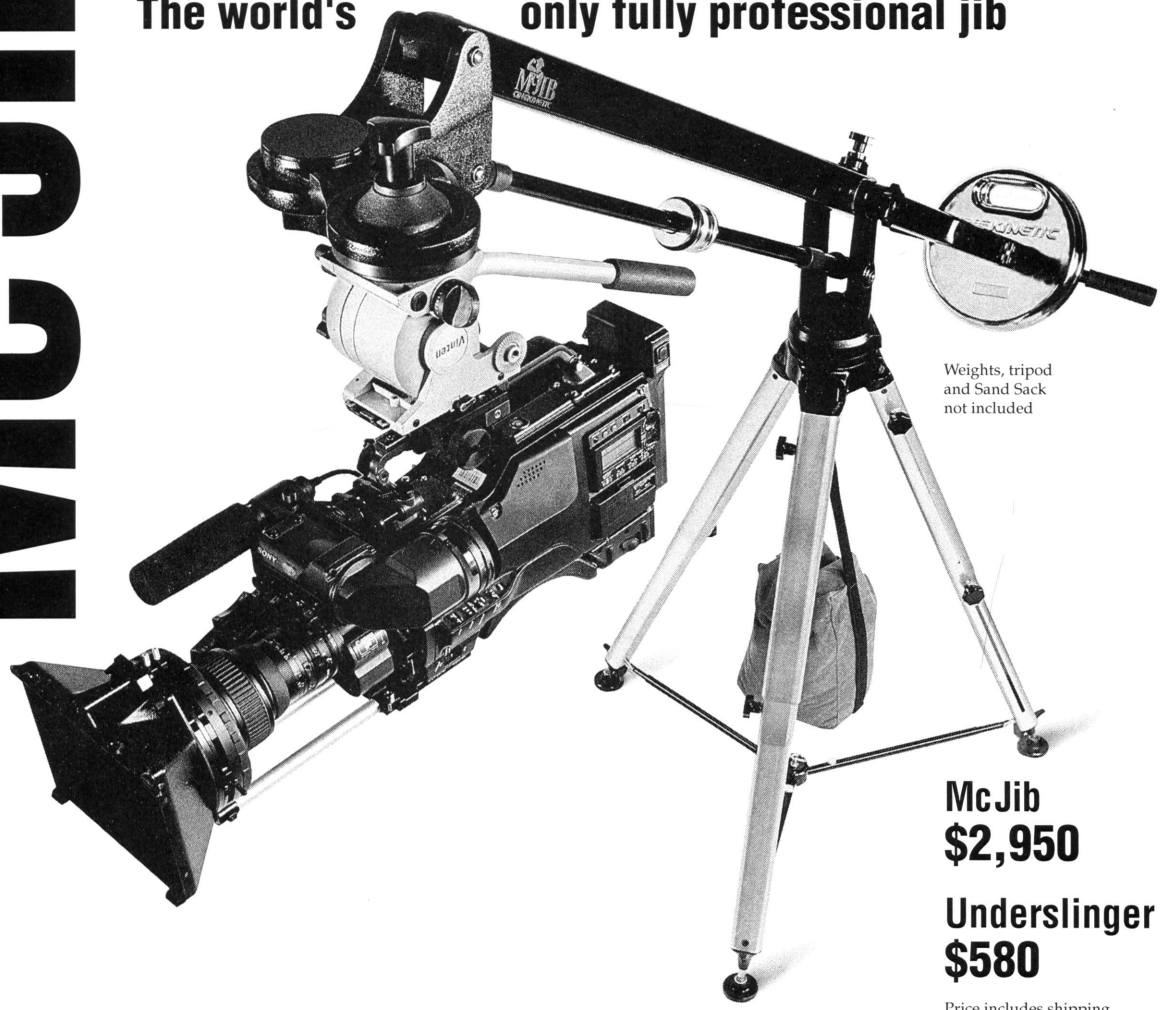

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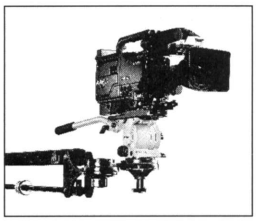

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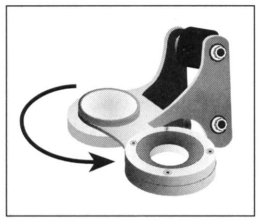

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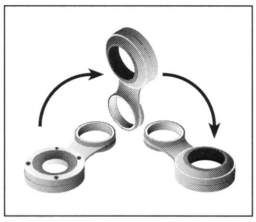

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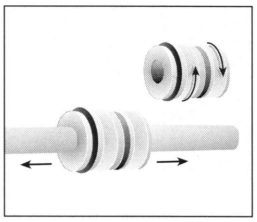

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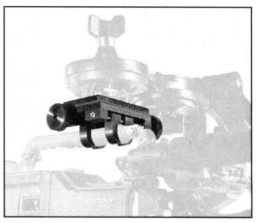

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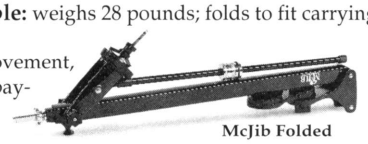

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February 1996 Vol. 77 No. 2

American Cinematographer

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On Our Cover:
Sailing the seemingly-tranquil Caribbean, the *Albatross* is headed for disaster in *White Squall*, directed by Ridley Scott and photographed by Hugh Johnson (photo by Phillip Bray, courtesy of Hollywood Pictures Co.).

Contributing Authors:
Stephen Ashton
Richard J. Davenport
Bob Fisher
Rob Lueker
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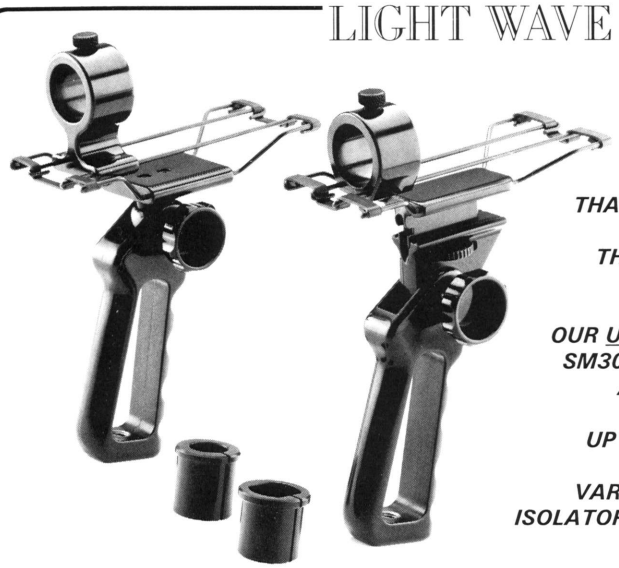

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American Cinematographer

February 1996 Vol. 77, No. 2

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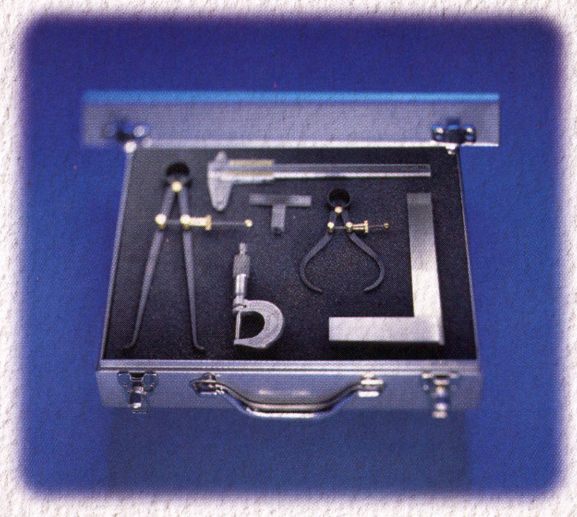

But MPEG-2 is more than a single standard. It's more like a tool kit: a set of compression tools that can be combined in different ways to serve different applications.

The transmission and distribution systems listed above are well served by one "profile" within the MPEG-2 matrix. The so-called Main Profile, Main Level. Exclusively confined to 4:2:0 component signals, it's designed to deliver subjectively high-quality pictures to the consumer. Today, compression technology is moving up the digital food-chain – and bringing important new efficiencies to studio production and origination.

That's where higher standards will come in. The MPEG Committee is currently evaluating a new profile, linked to the firmly established 4:2:2 digital studio origination hierarchy – utilizing full resolution of luminance and chrominance signals, and most vertical interval lines. Sony embraces this effort. Our approach is called the 4:2:2 Studio Profile. And it's designed to set a new high standard for demanding newsroom and acquisition applications.

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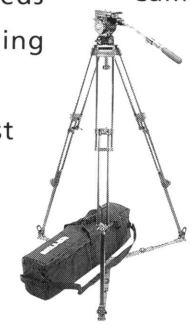

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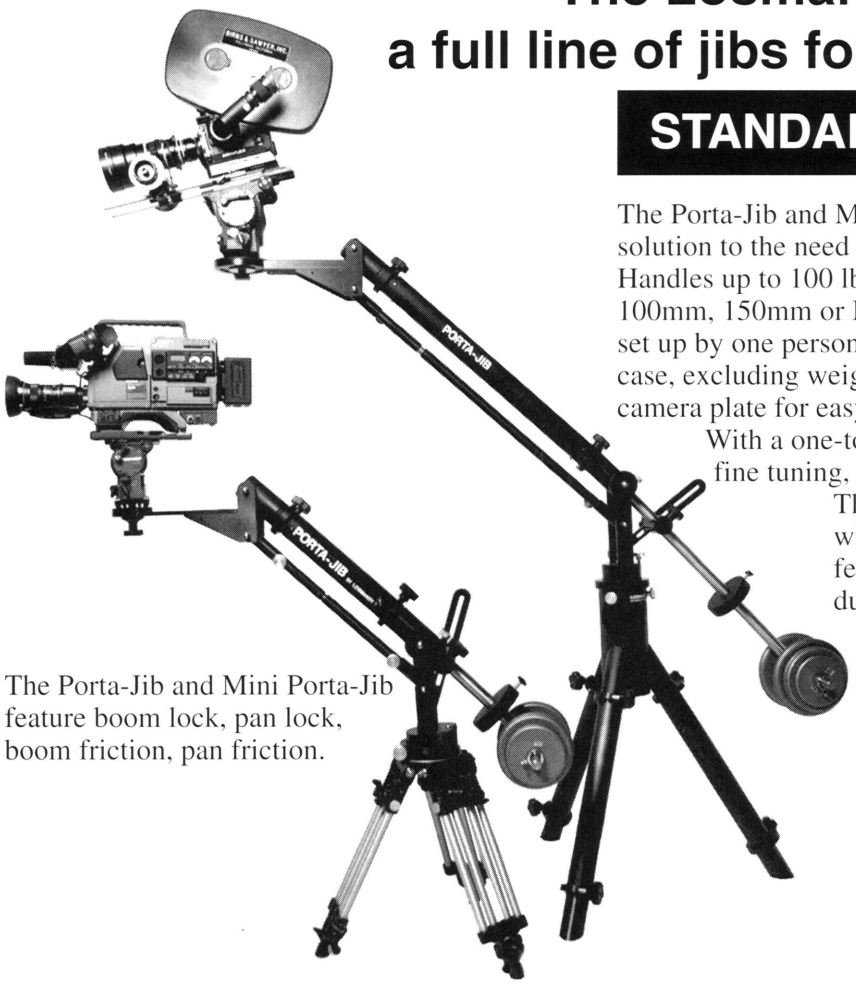

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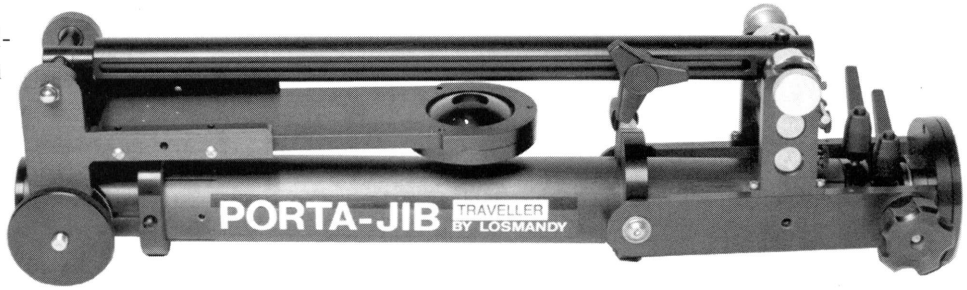

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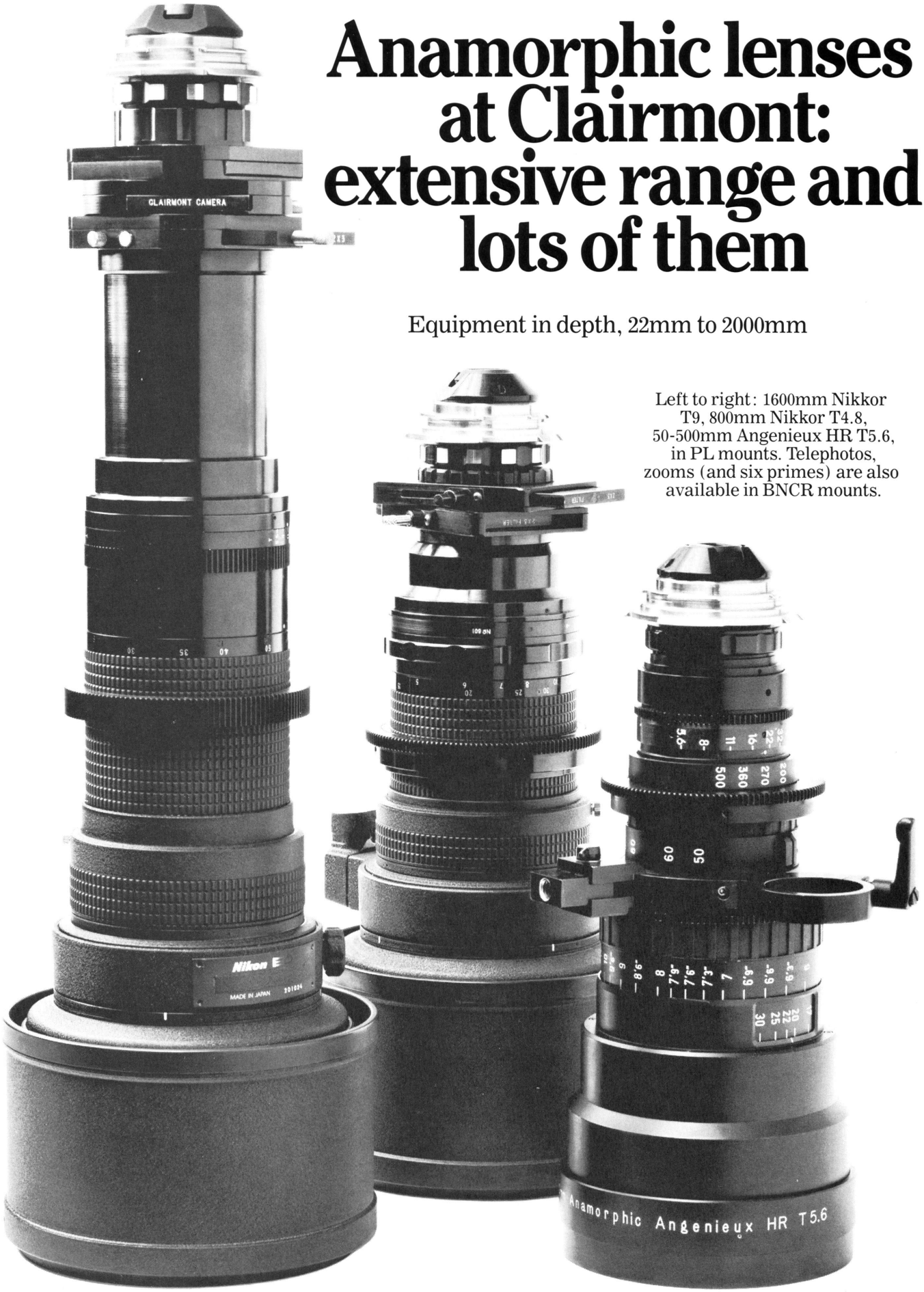

Left to right: 1600mm Nikkor T9, 800mm Nikkor T4.8, 50-500mm Angenieux HR T5.6, in PL mounts. Telephotos, zooms (and six primes) are also available in BNCR mounts.

Left: 600mm Nikkor T4. Right: two T2.3 Arriscopes. At back: 36-200mm T4, based on latest Cooke 18-100mm spherical lens design.

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1000mm Canon T8
1200mm Nikkor T6.3
1200mm Canon T8
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1600mm Canon T9
2000mm Clairmont T8
300-1200mm Canon varifocal T11

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36-200mm Cooke T4.5
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50-500mm Cooke T5.6
50-500 Angenieux HR T5.6
300-1200mm Clairmont / Canon T11

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24mm Cinevision T1.6
24mm Todd AO T1.6
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40mm Arriscope T2.3
40mm Clairmont T2.3
50mm Arriscope T2.3
50mm Clairmont T2.3
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Letters

News from Edinburgh

Scott Pickering (Letters, *AC* November 1995) will be interested to hear that just last night I heard Kenneth Branagh announce in a television interview that he intends to film a new version of *Hamlet* "in 70mm" (sic). This is hopefully to be of the complete text and will run about 3 ½ hours — a very encouraging announcement.

I also thought it interesting that a recent local article on the filming of *Jude the Obscure* in central Edinburgh mentions it being filmed "in CinemaScope dimensions." Another film with Edinburgh exteriors that has proved a great favorite over the years is the 1959 Twentieth Century-Fox CinemaScope feature *Journey to the Center of the Earth*. It features some good location shots at the start and finish and I would love to know if Henry Levin and Leo Tover, ASC actually came to Edinburgh, or if these scenes were filmed by a British unit.

The latest issue of *AC* is full of interesting articles, and I hope you keep on with historical subjects. How about a series on collaborations between cinematographers and particular directors or actors — Hitchcock and Robert Burks, ASC, Audrey Hepburn and Franz Planer, ASC, etc.?

Best wishes to you and for the future of the magazine.

— Murray A. Callan
Edinburgh, Scotland

Piqued by Pan-and-Scan

I'm asking a question I've wondered about for some time: Why are widescreen films (either flat 35mm or any form of wider screen) shown letterboxed for their titles and either pan-and-scanned or lock-it-and-lump-it (where the video camera doesn't move regardless of side screen action) for the story part of the show?

In the days before that now oft-used warning, "This film has been modified from its previous format," I'd turn off the film in a rage when I saw the lovely letterboxed image become a pan-and-scan one once the titles were over. "It has been formatted to fit your screen." In that case, why doesn't it?

Letterboxing the titles only says to me that they're more important than the showing of the filmic story. Camera angles, lighting, performance, production design, the environment in general — and the emotional power of the story — is diminished by having bits of the image missing at the behest of those doing the video transfer.

The curious part of this is that there must be a tremendous effort put into the non-letterboxed presentation: someone has to sit there deciding with each frame which part of the image they're going to show at any moment, and which character or bit of detail is most important for us to see (which has already been done once — when the film was being made). That's a big responsibility.

Hasn't anyone who has seen the film on the big screen noticed that suddenly the image is substantially smaller than it used to be? Doesn't anybody get annoyed by the video frame cutting people in two or having arms/hands/bits of furniture sticking into the image with nothing attached to them?

If the show was letterboxed, as the titles are, there'd be no problem: everything would be visible, all the time. Sadly, however, most shows are not letterboxed. Even with that inaccurate and watered-down warning, I still don't know if a film is flat 35mm (such films are frequently shot to protect the TV-safe area, anyway) or a genuine widescreen show. Filling the screen with a standard 35mm print is much less annoying than having half the image missing through pan-and-scan moves.

— Roger Brown
Gibsons, British Columbia

Please send any comments or suggestions to Letters to the Editor, American Cinematographer, *P.O. Box 2230, Hollywood, CA 90078. Or reach us online at* ASCMAG@aol.com.

THROUGH THE EYES OF MICHEL HUGO, ASC

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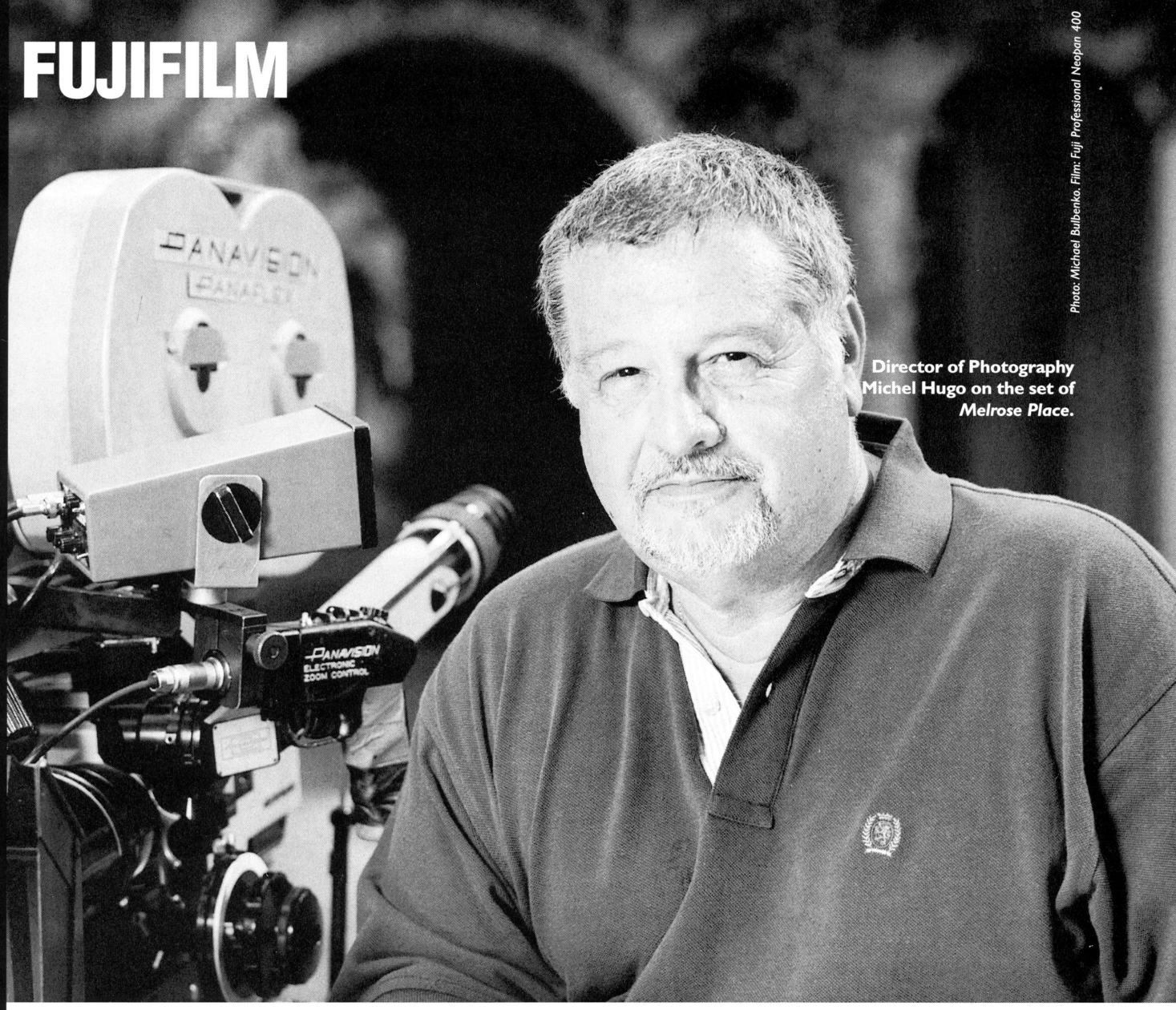

Photo: Michael Bulbenko. Film: Fuji Professional Neopan 400

Director of Photography Michel Hugo on the set of *Melrose Place*.

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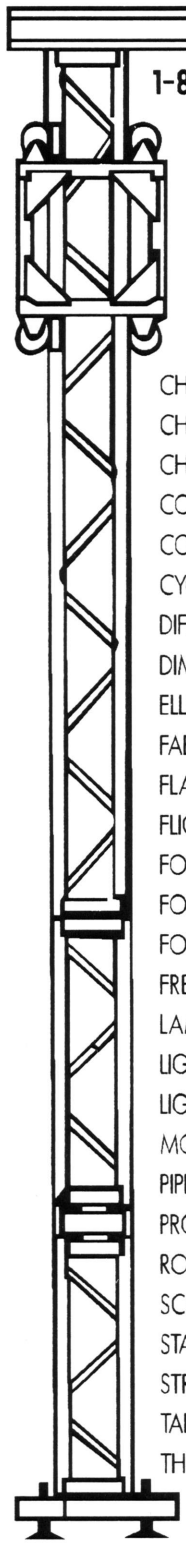

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Tape Transfer: Advice and Options from Top Colorists

by Debra Kaufman

The telecine suite is the gateway to postproduction, and is often considered the most mysterious room in the post house. It can be doubly mysterious for cinematographers too busy to go to telecine transfer sessions. As Digital Magic senior colorist Randy Starnes puts it, "The credit [for the image] always goes to the photographer. We're their hands, their replacement for the lab timer." To find out how cinematographers can best use those hands, *AC* spoke with a group of leading colorists to learn about the latest technologies and tricks of the trade.

"What may work theatrically doesn't always work the same way in film-to-tape land," notes Roger Doran, colorist at Post Perfect in New York. For that reason, colorists are keen on tests.

Doran highly recommends shooting a Macbeth chart (Post Perfect has several to lend out to directors of photography) as a "good jumping off point." He also finds it useful for the cinematographer to shoot a framing test, especially when the project is 16mm. With only two perfs per frame, there's a chance the framing will be off; a test enables a director of photography to line it properly so that what's been shot is what he'll see on the screen.

Picking the right telecine for the job also means tests. Randy Starnes, senior colorist at Digital Magic in Santa Monica, reports that Roland "Ozzie" Smith ran tests there when he was preparing for his first episode of *Dr. Quinn, Medicine Woman*, which is shot on 16mm. Based on those tests, he chose the BTS Quadra (the upgraded FDL-90, with full-bandwidth 4:4:4 output.)

"What he saw and liked about the FDL-90 was a transparent image," says Starnes. "The CCD pick-up is the same technology used in high-res scanners, so there's no loss between the film and the pick-up. You don't have a two-pattern and you don't have dust or dirt coming from a mirror. It's a very clean, high-res image."

Smith and Starnes determined that if softening was needed, it could be added later, rather than in-camera. Starnes also describes the Quadra as "very stable" with "very little movement on 16mm film." Because the Quadra has no tube pick-up that ages over time, the images have stayed consistent over four seasons.

The colorist also has numerous hardware and software tools to manipulate the image, such as the URSA's ability to turn images into shapes. Gary Coates, senior colorist at Western Images in San Francisco, notes that although this ability is often used as a creative application, it was "originally intended to rectify perspective errors."

Coates explains, "For an effects shoot with multiple plates, for example, if a camera was moved slightly, thereby shifting perspective, I can shift it back again with the URSA and get the plates to match up."

Coates reports that the telecine suite now offers "object-oriented color correction" with switchers and DaVinci's Power Windows. A Power Window is a soft gradient that can be superimposed over a portion of the picture, softly blending in a different exposure or color. For example, Laura Jans, colorist at 525 Post Production in Hollywood, describes an establishing shot of a house where Power Windows was used to electronically "wipe" one-third down into the picture, adding warmth to the sky where there was none before.

"With Power Windows, I can introduce a soft window shape which creates a key light," adds Coates. "You can shine light on the title that didn't get enough light, or change the color within that gradient. In a sense, you're re-lighting the scene even after development."

experience

THE DOMINO EFFECT

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Double A Pictures/American Zoetrope for Lumiere
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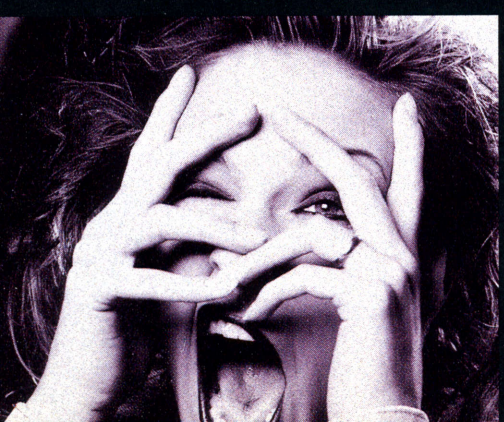

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Jans points out that in addition to Power Windows, the DaVinci features a key path, which allows the colorist to add color to a blown-out sky without affecting any of the other signals. Depending on the circumstances, a combination of Power Windows and keying can sometimes be the best way to go.

The switcher, a device typically found in an edit bay, is being added more often to a contemporary telecine bay, allowing the colorist to create layers of images and control how each layer is color-corrected — effects previously impossible in telecine.

According to Coates, the colorist can also create filter effects if the cinematographer couldn't apply them in the field. By introducing tissue paper or crumpled cellophane between the mirror and the telecine gate, says Coates, the colorist "can creatively influence the light passing in front of it, transforming the optical look of the film."

Jans notes the benefits of Metaspeed, a device which allows her to vary the speed of the film between 4 fps and 95 fps, another trick heretofore unavailable. Though Jans stresses that the success of using Metaspeed is dependent on the imagery in the shot, it can, in principle, make footage look as if it was shot high-speed when it wasn't.

There are future enhancements to look forward to. Coates reports that DaVinci is collaborating with Eastman Kodak to make its color-correction technology available on the Cineon digital compositing workstation.

Everyone interviewed stressed the importance of making one's desires known to the technicians working on the transfer. Jans suggests that when shooting multi-camera or in low-light conditions, the director of photography should put a blue gel on the red Smart slate to make it more legible. For the cinematographer too busy to call in daily to the colorist, Doran suggests an easy alternative: use a microcassette tape recorder to detail film stock, filters, lighting conditions, and the desired look; the colorist can listen to the tape before transferring dailies.

"The telecine changes a lot," adds Coates. "But most colorists are willing to open the doors and acquaint directors of photography with processes they might not be aware of. Come on in and see what we've got."

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Pictured on location for Spelling Productions' "Season in Purgatory" are from left to right Warner Wacha, 2nd AC, Rob Robinson, 1st AC, and Paul Varrieur, operator.

Film Commission Updates

compiled by Marji Rhea

Alaska

The sixth annual Film Office billboard went up on Sunset Blvd. in Hollywood in December, promoting two messages. A winter scene is headed "Shoot Santa Where He Lives...Shoot Alaska," and a summer scene of majestic mountains and blooming wildflowers suggests "Shoot Mother Nature in the Buff...Shoot Alaska." The Film Office's campaigns have garnered awards from several organizations, including the Advertising Federation's Best of the North awards and the Public Relations Society of America – Alaska Chapter Aurora Awards.

The Alaska Film Office, (907) 269-8137, FAX (907) 269-8136.

Bahamas

In an effort to attract more projects to the region, the office of Bahamas Film and Television Commissioner Darlene Davis was recently relocated to Los Angeles. She can be contacted at 3450 Wilshire Blvd., Suite 208, Los Angeles, CA 90010, (213) 385-0033, FAX (800) 4-BAHAMAS.

California

The San Diego Film Commission offers a Film & Video Resource Guide for information on permits, contacts, weather and sunrise/set charts, local unions, support services, freelancers, equipment, accommodations, restaurants, etc. It can be ordered by calling (619) 234-FILM, FAX (619) 234-0571.

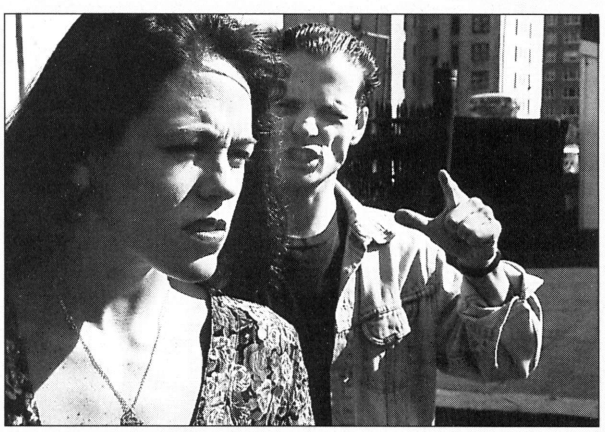
Unusual Offerings Highlight Toronto Film Festival

One of the largest celebrations of cinema in the northern hemisphere, the "Festival of Festivals" recently presented its 20th installment.

by Stephen Ashton

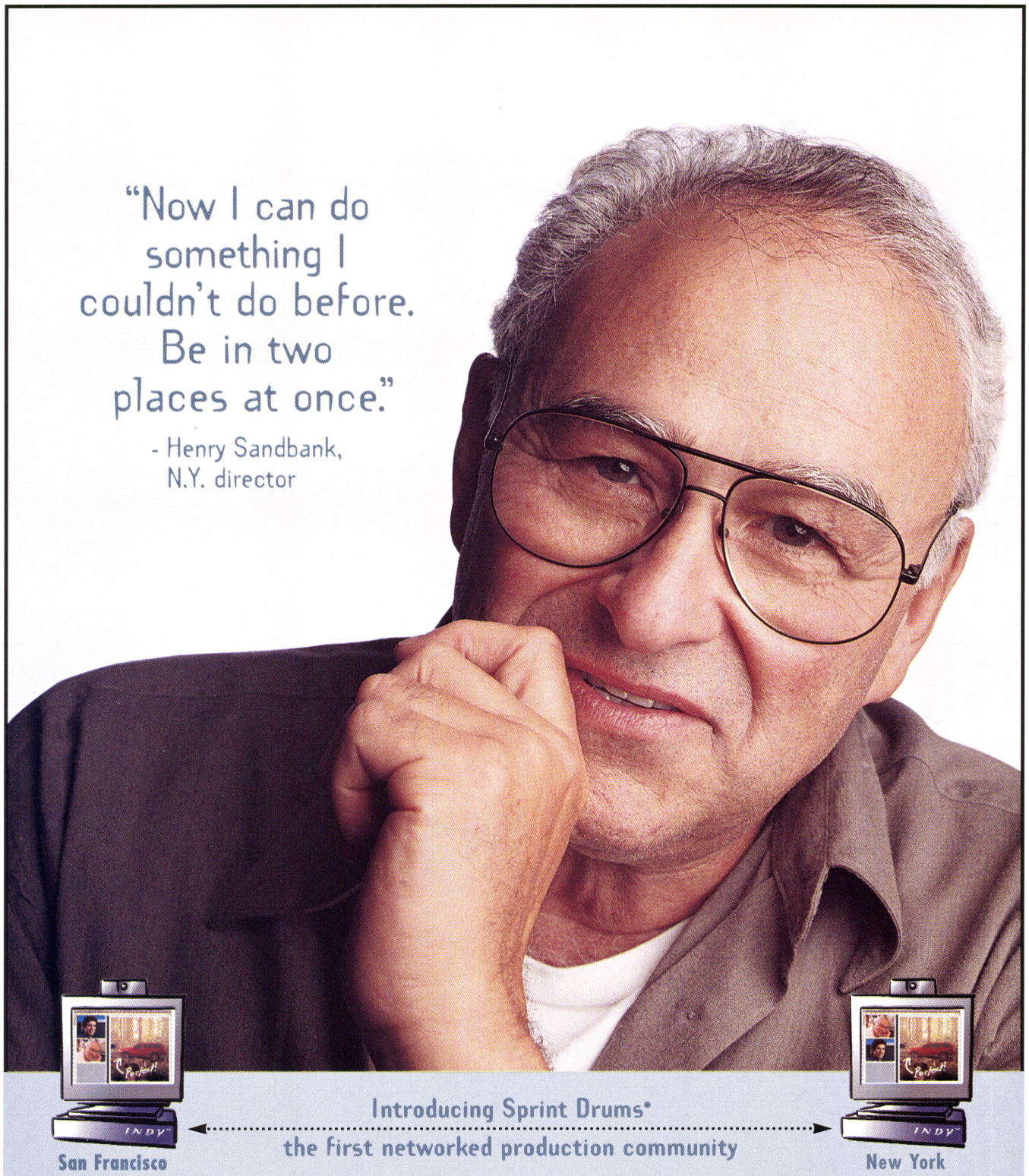
Toronto has proven itself in recent years to be something of a film mecca, attracting productions from both inside and outside Canada because of its ability to pass for many other cities. Also becoming increasingly popular is the city's International Film Festival; the most recent edition celebrated the 20th anniversary of what was known for years as a "Festival of Festivals," a place where one could see a collection of great films from other international festivals. But the scope and scale of the event has expanded so that it is an international fete in its own right, attracting audiences from around the world.

Coinciding with the Festival is the Forum, a popular series of special seminars and meetings designed for professionals who want to expand into other areas of their professions. Acclaimed actor/director Kenneth Branagh was this year's keynote speaker and he, along with actor Michael Malony, gave a rousing, often humorous account of how they made *In the Bleak Midwinter (Midwinter's Tale)* amid the perils of international co-production.



A stark tale of urban drama,* Desolation Angels *was shot on 16mm for both budgetary and mobility considerations.

Toronto's theaters are at full capacity during festival time, filled mostly with cinephiles who wait hours in line and keep coming back for film after film. In the last few years the sellout crowds have caused consternation



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Florida

The Metro Orlando Film & Television Office welcomed Continental Film Laboratory to Orange County, Florida this year.

The Miami-Dade Office of Film Television and Print, meanwhile, has reorganized the film office and appointed several new officers in its goal to increase support for the production industry. The Dade County Film, Print and Advisory Board, the Miami Beach Fashion, Film, TV and Recording Committee and the North Miami Film, Video and Recording Board have also been working for the past year to expand cooperation and shared services among the organizations.

The Palm Beach County Film and Television Commission reports the launch of a global music television network, TMZ (The Music Zone), which airs from Palm Beach and is distributed simultaneously throughout the world via satellite.

Metro-Orlando Film & Television Office, (407) 422-7159, FAX (407) 843-9514; Miami-Dade Office of Film, Television & Print, 111 NW 1st Street, Suite 2510, Miami, FL 33128; Palm Beach County Film & Television Commission, (407) 233-1000, FAX (407) 683-6957.

Georgia

MGM's latest action-comedy, *Fled*, starring Laurence Fishburne and Stephen Baldwin, began shooting in Atlanta in November. Also filming in Georgia last year were Spelling Television's series *Savannah* and telefilm *A Season in Purgatory* in Atlanta and Sea Island; TNT's Civil War mini-series *Andersonville*, in Turin; the television pilot for *The Client;* New Line's *Now and Then*, starring Demi Moore, Rita Wilson, Melanie Griffith and Rosie O'Donnell, in Savannah and Statesboro; and the BBC's *Soul Survivors*, about an English disc jockey who travels to the U.S. to follow his lifelong dream of reuniting his favorite band, in Atlanta.

The Georgia Film & Videotape Office has available the Filmmakers of Color Directory, a listing of film and video professionals located in the Southeast. The directory can also be ordered from Filmmakers of Color at (404) 755-2964.

The Georgia Film & Videotape Office, (404) 656-3591, 24-hour newsline (404) 656-6497.

Hawaii

The third event of the Kauai Film Commission's Kauai Institute for Communications Media, a learning institution focusing on international conference events on topics linked to various media forms, is Storytelling for the New Millennium, to be held from April 22-28. The event is aimed at artists interested in immersing themselves in filmmaking, new media, graphic design, music and sound design, Web and Internet design,

among film industry folks who flock to Toronto to see new pictures and finalize deals which have stirred interest since the preceding Cannes film festival and Venice. This year, several new screens were put into operation to accommodate more screenings exclusively for the press and industry attendees.

Toronto's Gala Screenings include event presentations of studio films for the most part, but also feature new Canadian and international films. Included this go-'round were Carl Franklin's *Devil in a Blue Dress*, Gus Van Sant's *To Die For*, Diane Keaton's *Unstrung Heroes*, Andrew Davis' *Steal Big, Steal Little*, James Keach's *The Stars Fell on Henrietta*, Peter Yates' *Run of the Country*, Charles Matthau's *The Grass Harp*, Sean Penn's *The Crossing Guard*, Woody Allen's *Mighty Aphrodite*, Mike Figgis' *Leaving Las Vegas*, Doris Dorrie's *Nobody Loves Me*, Darrell Roodt's *Cry the Beloved Country*, Mort Ransen's *Margaret's Museum*, Tomas Gutierrez Alea and Juan Carlos Tabio's *Guantanamera*, Michael Verhoeven's *My Mother's Courage*, Claude Sauter's *Nelly et Monsieur Arnaud*, and Robert Lepage's *Le Confessional*.

Although the lineup of high-profile films is impressive, the Toronto Festival also provides a great opportunity to see and appreciate films which might otherwise have a hard time getting noticed. Among the most noteworthy were *Desolation Angels* and *Synthetic Pleasures*, covered below. Another impressive entry was *Rude*, the debut film by Clement Virgo, which will be the subject of a feature story in next month's *AC*.

Desolation Angels (USA)
Director: Tim McCann
Cinematographer: Matthew Howe

Tim McCann's debut film has been earning him such accolades as Toronto's FIPRESCI Award for Best First Feature (which was shared with another picture) and the Merchant Ivory Award at Telluride. *Desolation Angels* is set amongst a group of friends who fall victim to rage and jealousy. Nick (Michael Rodrick) and Sid (Peter Bassett) share very little in common, although they have been close friends since college: Nick comes from a working class background, while Sid is spoiled by his rich mother, who can't resist his manipulating pleas to fund his would-be acting career. After returning from a month spent out of town taking care of his sick mother, Nick discovers that Sid has made unwanted advances toward his girlfriend Mary (Jennifer Thomas) during his absence.

Director McCann graduated with honors from the SUNY Purchase Film program in 1987 along with Hal Hartley, Bob Gosse and Nick Gomez. Hartley's success with his ultra low-budget *The Unbelievable Truth* inspired McCann, who works as a cinematographer when not directing, to produce his own film rather than wait to be discovered by Hollywood. With only $25,000 to put the film in the can and a "breakneck shoot of 21 days in a row," he and cinematographer Matthew Howe decided to shoot in 16mm, not just for the cost consideration for stock and processing, but for the ease of handling and speed of the lighter, smaller gear. They had to work fast, stealing locations on New York City streets and parks, and using friends' houses for interior locations. "That worked great," Howe states, "until at a key location we fried the wires."

"The owner of the building had a letter in our hands that very day and we had to leave," McCann adds. "We left a P.A. behind to tell my friends," he says now with a tone of regret. "But I could only afford to feel guilty for two hours."

The film's Toronto audience was surprised to discover that the 35mm print projected was a blow-up from 16mm. "I was shocked to see how good

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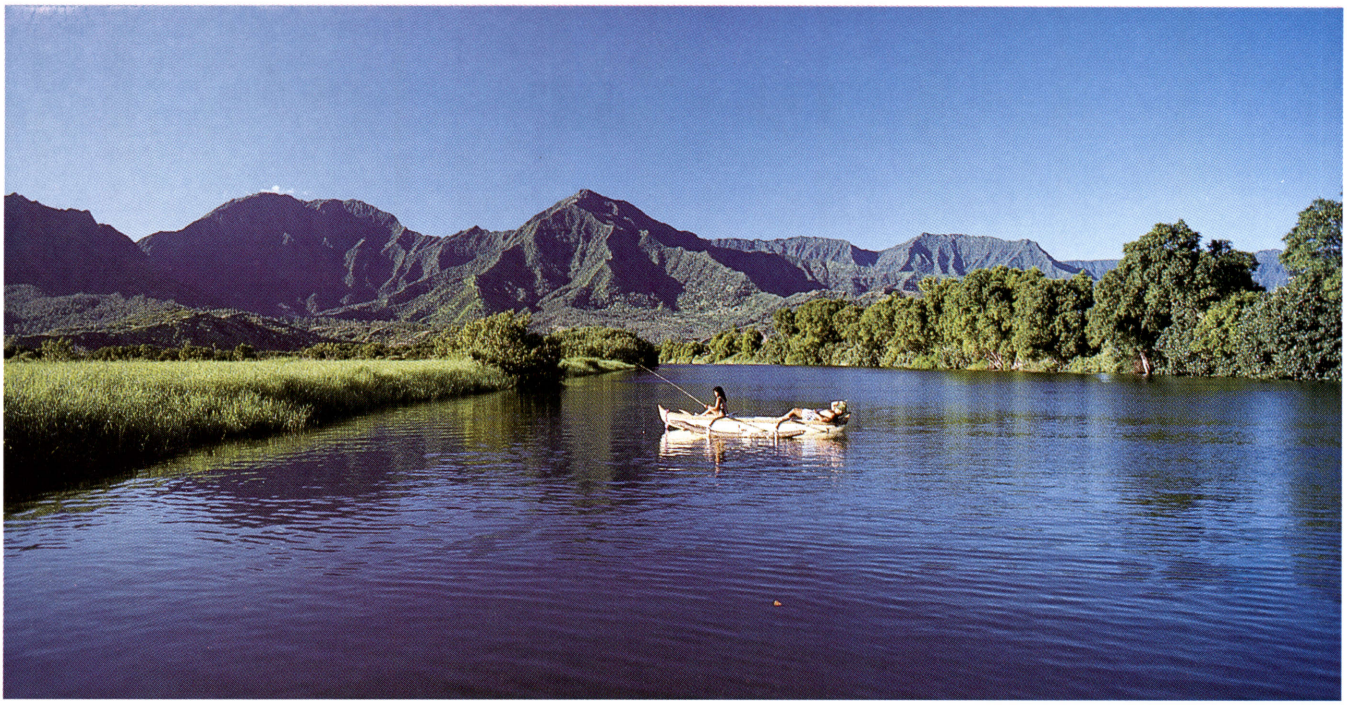

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Massachusetts

The Crucible, starring Daniel Day-Lewis and Winona Ryder, began filming in September on Hog Island in Essex, where the company re-created Salem Village as it was in 1692. The state was able to convince Fox executives to bring the film there after enlisting the National Guard to assist with barge transportation to the otherwise unreachable island.

Also filming in Massachusetts this year were *Sabrina* on Martha's Vineyard, *Mrs. Winterbourne* in Boston, *To Gillian On Her 37th Birthday* on Nantucket, and *Celtic Pride* in Boston.

Massachusetts Film Office, the Transportation Bldg., 10 Park Plaza, Suite 2310, Boston, MA 02116, (617) 973-8800.

Nevada

The State of Nevada Motion Picture Division has a new Web address offering access to location photos, listings of upcoming productions and local service providers, as well as information on Las Vegas, Reno and rural Nevada.

The State of Nevada Motion Picture Division, (702) 486-2711, FAX (702) 486-2712, *http://www.intermind.net/kvbc/nmpd/.*

New York

In an effort to consolidate resources and increase efficiency, the Governor's Office of Motion Picture and Television Development has moved to the headquarters of the Empire State Development Corporation and Department of Economic Development. The new offices are at 633 Third Avenue, 33rd Floor, New York, NY 10017, (212) 803-3100, FAX (212) 803-2339.

North Carolina

North Carolina has launched a program to promote the state's computer graphics and imaging technology providers. NC/Vision aims to increase awareness of the state's expertise in such areas as animation, simulation, multimedia, and film and video special effects, and is especially concerned with keeping the state's computer graphics graduate students and faculty from having to migrate to other regions for jobs. The project plans to be present at national industry events this year.

NC/Vision, (919) 481-0578, FAX (919) 481-4639, ncvision@cybernetics.net.

Quebec

The Film Office of Quebec is touting *Le Confessional*, the official en-

---

the blow-up looked," Howe confesses. "I credit it to the Zeiss SuperSpeed lenses. I used only primes — a 9.5mm, 12mm, 25mm, and 50mm. At least half the picture was shot on the 12mm, a lens I fell in love with. We used slow-speed 7293 at ASA 200 for the interiors.

"We shot the exteriors with 7245 — ASA 50 daylight, with is an amazing stock with virtually no visible grain," he adds. "For the night shoots we used high-speed 7296 and it looked good, too. DuArt did a brilliant job with the blow-up."

McCann credits geography and good fortune in being able to finish the film and make the blow-up. The picture was brought to the attention of one of McCann's mentors, Oscar-winning director Jonathan Demme, who after seeing a rough cut decided to shepherd the project through its finishing stages. "I was very taken with the film," says Demme. "It felt like the work of a total filmmaker. He's really telling a story in a straightforward, surprising way. I found the film thoroughly riveting and impossible to stop watching."

The 35mm blow-up made a difference in the final aesthetic decisions of the film as well. "The difference between 16mm and 35mm is that in 35mm you really do see much more," McCann notes. "I prefer the aspect ratio in 35mm, too. It is more intimate; your eyes don't dart around. It was a real eye-opener for me, and I cut out a few scenes that either didn't work or weren't needed after I saw the blow-up.

"Another consideration is the experience of the film for the audience," he continues. "The audience seems to get much more into it. And it's more of a neo-realist film now. The effect of our lighting and style is actually much more obvious in 35mm."

Howe adds, "We really worked the color of the light to fit the different moods of the shoot."

Would he shoot another picture in 16mm? Responds McCann, "I'll tell you, you can go from one location to another much more quickly. It's small and easy. You can shoot on 87 — a faster stock — and you can use less light and a smaller crew."

Much of the liveliness of the film's look is due to the handheld camera work, executed by McCann himself. Although 50 percent of the film was shot handheld, he preferred to shoot without a Steadicam. "It's not lively enough for me, particularly in the park scene," he says, referring to the scene in which Nick confronts Sid after Mary's sexual assault and is beaten by Sid's boxer friend. Shots from Nick's point of view as he is lying on his back show his attackers walking away. "It's very engaging to see things upside down," McCann says. "It brought the film style and the emotions of the character together."

However, he adds, "Every cinematographer knows that the film is not about the cinematography." He points out that most directors come from one side or the other — their experience is usually gained either through camerawork or through writing or editing. According to McCann, the writing-oriented director is frequently not as concerned with the cinematography. "I've shot films and I've written scripts, and I've also worked with actors," he says. "But I like to be behind the camera. I like to be directly involved with the composition and what is seen on the screen. That's got to be secondary to the story, though."

Although he was advised against it, McCann chose to direct and operate the camera. He was warned that it would be difficult to get the best performance from his actors, but they have received praise at most screenings. "I don't think that was a problem, really. The work with the actors takes place before we start to roll. I don't think it matters if you are beside the camera or behind it. But it did stop me from stand-

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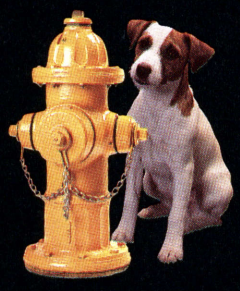

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try for foreign language film for the Academy and Golden Globe Awards. Set in Quebec in the 1950s and the present, the film is a mystery involving the filming of Hitchcock's *I Confess* in the city in 1952.

Another Quebeçois production, *Le Chant des Sirenes* by filmmaker Louis Ricard, explores the theories of Canadian composer R. Murray Schafer, who believed that every environment is an unfolding musical composition in which a person is simultaneously the audience, the performer, and the composer. In his film, Ricard follows seven test participants, their heads covered in thick velvet hoods, as they spend the day experiencing the "soundscape" of Old Quebec City.

Bureau du Film de Quebec, 171, rue St. Paul, bureau 100, Quebec G1K 3W2, (418) 692-5338, FAX (418) 692-5602.

Tennessee

Speer Communications, a Nashville-based communications company, has built a multi-million dollar television production facility fully equipped with state-of-the-art satellite uplink/downlink technology and multiple production and postproduction studios. The new facility is now home to the WOR Network and WNAB Channel 13.

Home & Garden Television, which currently reaches 10 million households in the U.S. and Canada, launched its cable network from its new headquarters in Knoxville.

Productions shot on location in Tennessee in 1995 were *Last Dance*, starring Sharon Stone and Rob Morrow, in Nashville; *A Family Thing*, starring Robert Duvall and James Earl Jones, in Memphis; *A Box of Moonlight*, starring John Turturro, in Knoxville; and the ABC sitcom *Grace Under Fire*, which shot an episode in Memphis.

Tennessee Film, Entertainment and Music Commission, (615) 741-3456.

ing back and seeing what was going on. I don't want to operate on my next film.

"If you have a very specific sense of composition, I found it was less time consuming and less confusing for me to see the shot through the camera," says McCann of the videotap-less shoot. "I got exactly what I wanted."

McCann is currently planning a feature entitled *Physical Graffiti*, a romance set in a New Jersey go-go bar which will be sure to put to good use the $50,000 worth of Kodak stock he won with the Merchant Ivory Award.

Synthetic Pleasures

Directed by Iara Lee
Produced by George Gund

Of the many fine documentaries at the festival, one stands out as especially unusual and thought-provoking. *Synthetic Pleasures*, conceived and directed by Iara Lee and produced by George Gund, is a feature-length sci-fi documentary that explores the world of cyberspace in a most imaginative fashion.

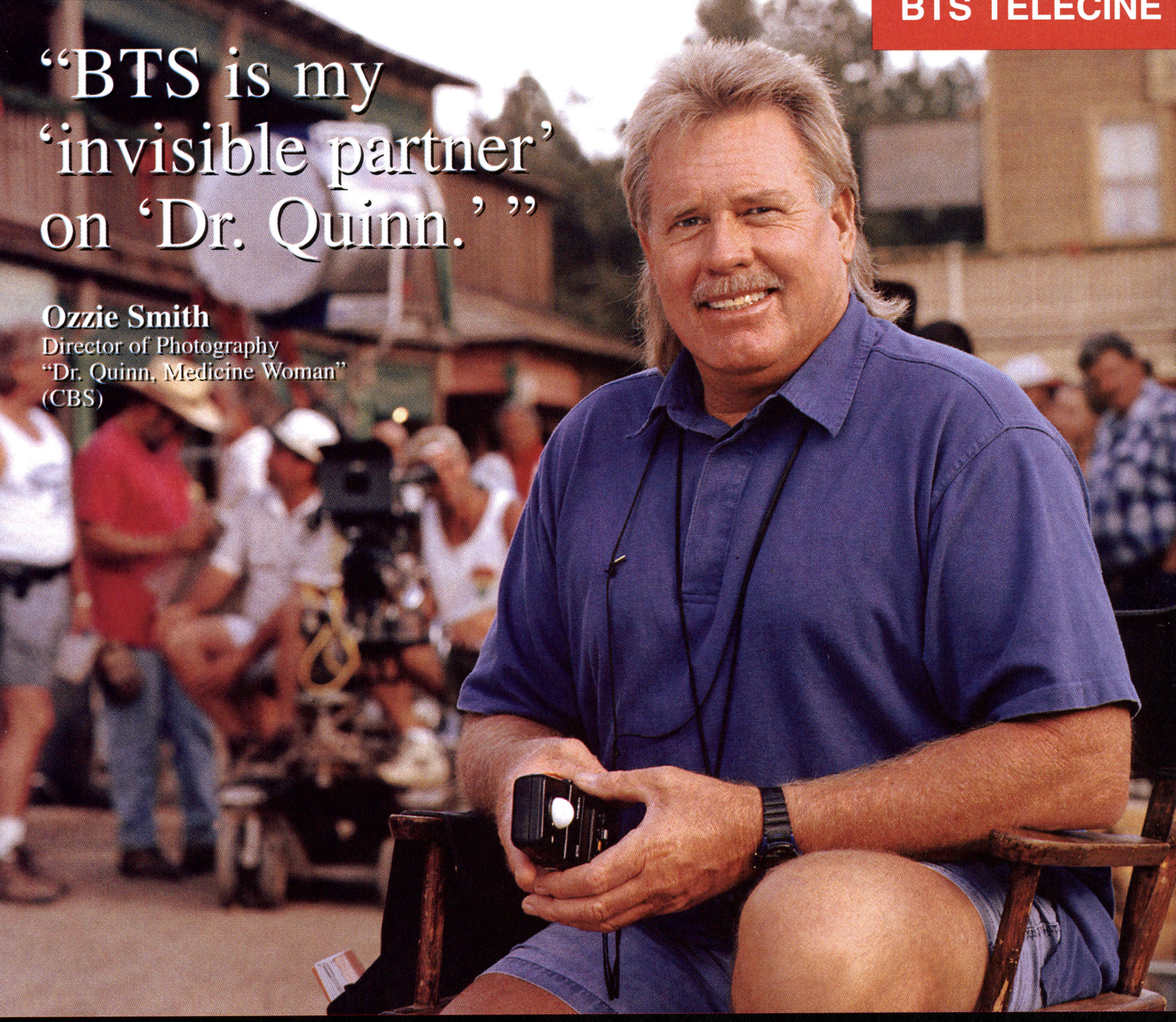
Lee's previous short films have been poetic, visual and beautiful, but *Synthetic Pleasures*, her first feature, carries forward her lyrical visual style. It captivates the viewer as she guides us on an encyclopedic journey into the startling universe of high-tech living and demonstrates the extent to which cutting-edge technology has permeated our lives.

The film opens with a montage of natural landscapes — beaches and forests, mountains and deserts — contrasted with a number of artificial spaces such as theme park jungles and indoor environments. A voice-over presents the question of whether our human drive to control nature and overcome its limitations is serving us well or rather is disconnecting us from the ecological cycle and even ourselves.

We see shots of surfing, a sport which demands a respect for nature's power, form and rhythms. But then the camera pulls back to reveal that the surfer is actually riding the waves of a man-made sea, contained within a huge structure, complete with artificial beaches and filtered air.

In Japan, where this biosphere is currently in use, many people prefer this environment to the real thing. It's reliable, clean, and easily accessible — a respite from polluted waters, dirty air and overcrowding. The Japanese have also built artificial mountains, complete with snow and ski resorts, all contained in huge buildings. *continued on page 24*

"BTS is my 'invisible partner' on 'Dr. Quinn.' "



Ozzie Smith
Director of Photography
"Dr. Quinn, Medicine Woman"
(CBS)

"Looking at 'Dr. Quinn, Medicine Woman' on television, you'd never know it was shot on 16mm film.

"A 16mm negative is *small*: about as big as your thumbnail. But we're getting big-picture richness from that tiny piece of film, thanks to the amazing abilities of the BTS telecine. It transfers exactly what I see when I'm shooting the show.

"The nuances I put on film to enrich the 16mm neg must be transferred onto tape without the telecine interposing any of its own picture artifacts.

"That's why I call the BTS telecine my invisible partner. I know I can count on it to give me on tape exactly what I shot on film.

"Those transfers are so clear it's like looking at them on a light table. No other telecine can make 16mm look as good.

"I've transferred every episode of this series at Digital Magic in Santa Monica, including the pilot. From the beginning, we took the time to experiment with every aspect of production and post-production to be sure we'd get our best shots. None of that would have worked if we had the wrong telecine. We were smart: we had the right one."

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"Dr. Quinn" is transferred at Digital Magic, a full-service digital post-production facility in Santa Monica, Calif.

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Texas

The Studios at Las Colinas recently entered into a long-term joint agreement with Paramount Pictures Studio Group to market and sell all products of Paramount Backlot Services, giving them added muscle to lure major productions. They will represent Paramount's lighting, grip, manufactured goods and other rental items throughout the five-state region of Texas, Louisiana, Arkansas, Oklahoma, and New Mexico. The Studios have hosted such productions as *JFK*, *Leap of Faith* and *RoboCop*.

The Studios at Las Colinas, Dallas Communications Complex, 6309 North O'Connor Road, Suite 222, LB #119, Irving, Texas, 75039-3510, (214) 869-0303, 1-800-2-IRVING, FAX (214) 869-4609.

Virginia

The Virginia Film Office has instituted a toll-free number providing up-to-date information on production opportunities in the Commonwealth of Virginia. The service will announce film, television or video projects slated for production in the state, casting and extra calls and other employment opportunities. The hotline is (800) 641-0810. The Office may also be contacted on-line at VAFLMOFF@aol.com.

Washington

The Washington State Film and Video Office has a new film commissioner, Suzy Kellet, former managing director of the Illinois Film Office and a 15-year veteran in the industry. She has also served as consultant to film commissions in Maine, Alaska, South Carolina, Toronto and Missouri.

Washington State Film & Video Office, 2001 6th, Suite 2600, Seattle, WA 98121, (206) 764-7148, FAX (206) 464-7222.

"In Japan the people consider this technological wonder to be just a part of life," Lee says. "It's only bizarre and science fiction for us because we observe it from outside." The film shows how people today are seeking out new ways to be gratified by unnatural pleasures, and then moves to the world of high-tech computer-generated images of nature as seen in video games and in virtual reality — all of which, as the film tells us, has the potential for transforming human consciousness.

"Human beings have always had this desire for transcendence," says Lee. "We are essentially insatiable animals. Intrinsically, we don't accept nature; this desire to change is innate. Technology seems to give us more power to change or at least the illusion that we can do it.

"There are many adventures that are inaccessible in the physical world, which could only be enjoyed in the virtual one," she says. "Computers and VR help us transcend the physical world, and therefore can be considered mind expanding. This infinite quest for expansion of the mind goes back to ancient times and is being continued in our day through high technology.

"Technology becomes a lifestyle. *Synthetic Pleasures* tries to get beyond high-tech theory and engage technology where it is lived. Computers facilitate tasks, but somehow make us work even harder. Technology frees and enslaves at the same time. It is a wonderful contradiction."

In a mixture of interviews, previously-produced footage and original computer graphics, the film delves into genetic engineering, smart drugs, mood drugs, "body art" (scenes of a performance artist who videotapes herself undergoing plastic surgery in order to "make herself a work of art" are particularly bizarre), cryonics, robotics, artificial life, life extension and, of course, erotic pleasures.

Lee's extensive use of mind-bending footage, good pacing, and lively editing succeeds in drawing the viewer deeper into this futurist time warp and in bringing home the point that all of the elements the film discusses are happening to some extent today.

The film offers broader perspectives on our relationship with technology, where this relationship is taking us and what its implications will be for the future. "The reality is that we are living in the post-industrial age and there is no way we can stop technology," says Lee. "We can only go beyond it by living through it."

Congratulations to Director ***Mike Figgis*** *and DP* ***Declan Quinn*** *on the success of*

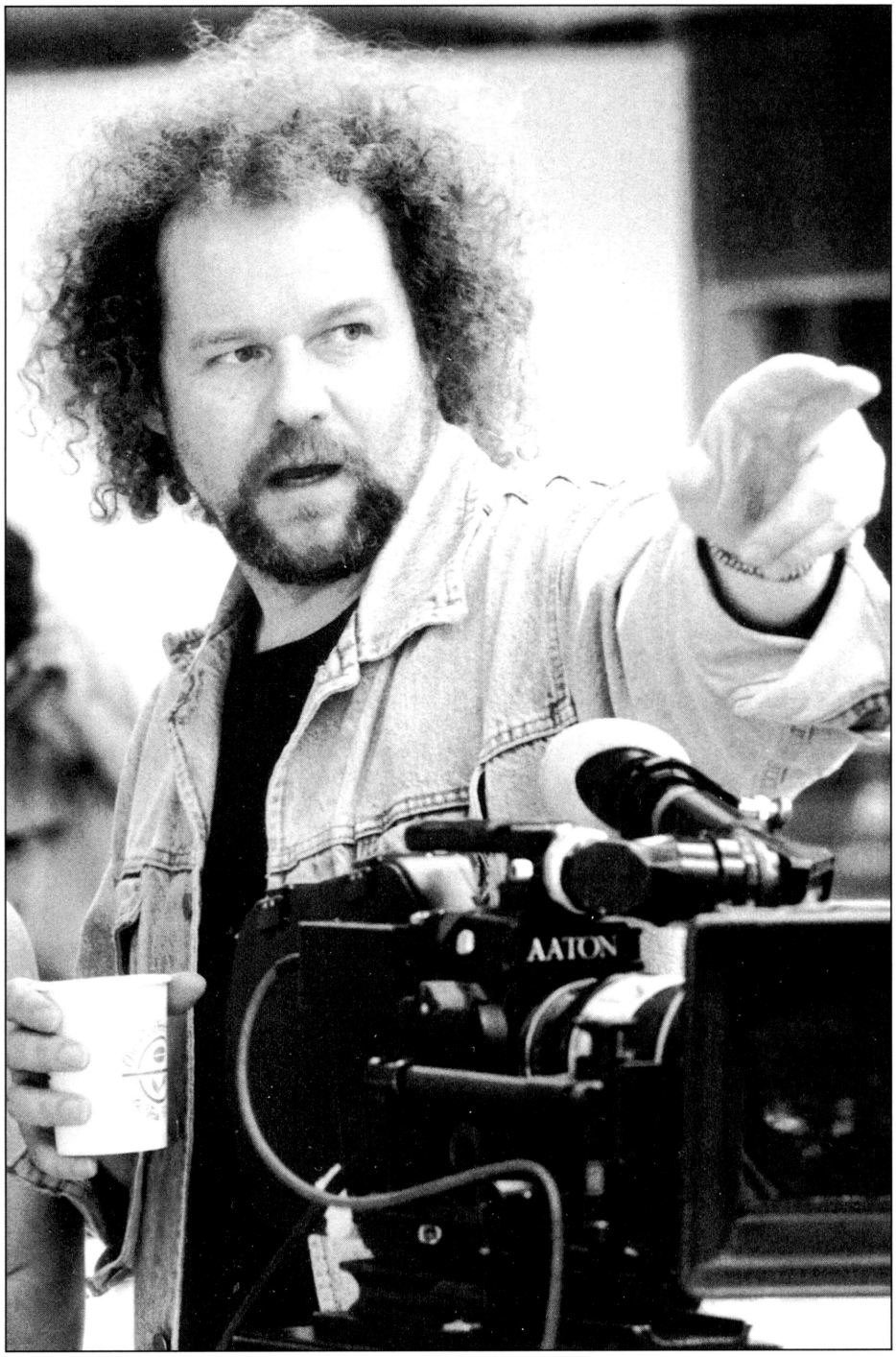

Photo: Suzanne Hanover

Mike Figgis on set with the Aaton XTRprod.

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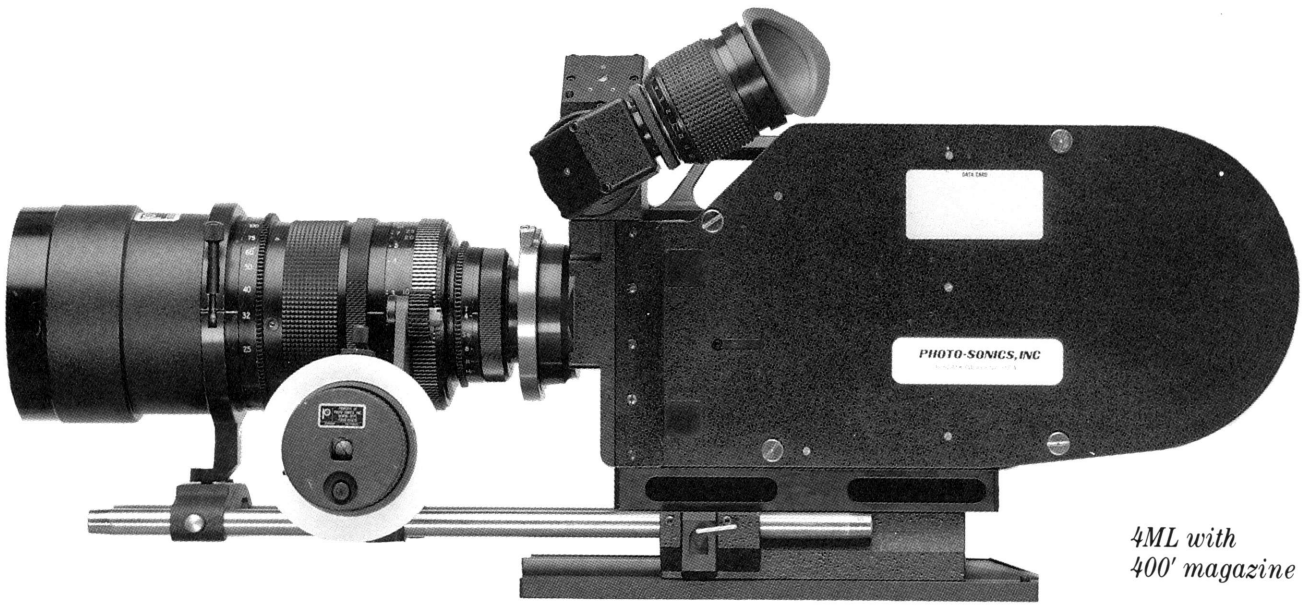


4ML with 400' magazine

Today, many cinematographers are pushing the limits of the equipment and materials available—film stocks, lights, cameras, lenses, etc. Now, with the 35mm-4ML reflex you can break through some of those barriers. The 35mm-4ML is a compact, lightweight user friendly high speed camera, which is capable of frame rates from 10 to 200 frames per second. Its cartridge-load type magazine makes it ideal for high paced sports and action type cinematography.

Yes, these cameras were originally developed for aerospace and military applications and have the ability to withstand extremely abusive environments. The 4ML camera was used in the filming of *"Wings of Apache"* where it was externally mounted on an Apache helicopter and in *"Top Gun"* where there were two cameras internally mounted in the cockpit of an F14.

Because of its compact size and low profile, cinematographers Mike Hoover and Don King utilized the camera extensively during the filming of *"Endless Summer II."* Special water housings were manufactured for the camera, which enabled them to capture incredible surf shots in waves as high as 20 feet!

Film Movement

The 4ML movement uses 2 register pins and 4 pulldown pins and maintains registration to a tolerance of ±.0002 inches. In other words, it is extremely steady and ideal for matte work. Its oiling points are minimal, which make the system very user friendly. Similar to our 16mm Actionmaster 500 camera, each magazine contains its own movement. Threading the magazine is fairly simple, and once your mags are loaded, the camera reload takes only 5 seconds. They are available in 200 loads and 400 foot loads.

Size

The 4ML can be easily converted to accommodate size and application requirements. There are 3 configurations.

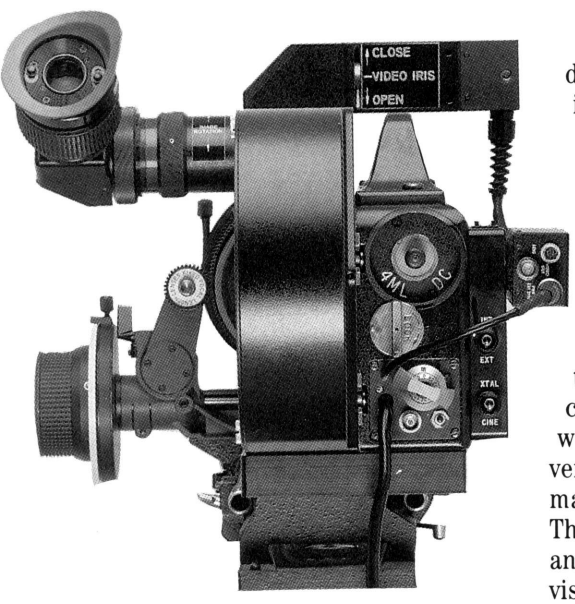
- Reflex with video tap.
- Reflex only.
- Non-reflex (point and shoot).

When used in the reflex mode with

video tap, crystal control, and 400 foot magazine, the camera is 9⅛ inches high, 17 inches long, and 13¼ inches wide. In the non-reflex mode with a 200 foot magazine, the camera is 5½ inches high, 14½ inches long, and 5¼ inches wide. In either configuration, it is most likely the smallest high speed 35mm camera in the world.

Video Tap

We use the same video camera used on our faster 35mm cameras. The system utilizes a high resolution camera which incorporates an elec-



tronically gated shutter that sharpens your video image by eliminating motion blur. This allows you to analyze your video playback with a greater degree of accuracy. The video camera is powered with 12 volts DC, which is fed from the film camera. This eliminates additional batteries and cables.

Speed Control

Speed control is a tach feed-back servo system which maintains frame accuracy of ±1 frame or 1%, whichever is greater. An optional digital speed control with crystal reference is available, which holds frame rate accuracy to ±.01 frames. This means the camera will be compatible to standard HMI lights when used at speeds within the recommended HMI (windows).

Strobe Sync

A highly accurate mid-shutter pulse is supplied for strobe synchronization through a BNC connector at the rear of the camera. This makes it compatible to most strobe systems available in the motion picture industry.

Power

The camera is powered from a single 28 volt DC battery pack that is no larger than a loaf of bread and weighs a mere 10 pounds. This supplies the video tap as well, using a step-down 28 volt - 12 volt converter located in the camera.

Adjustable Shutter

The shutter is adjustable from 144 degrees in the following one stop increments: 144°, 72°, 36°, 18°, and 9°. This allows you to sharpen your images without the additional cost of strobes. Shutter adjustment is easily done without use of tools.

Compatibility

The camera is fitted with an Arriflex eyepiece and is compatible to the 15mm Arri rod base. If you choose to use Panavision lenses, we have Pan-Arri adapters to convert to their lens support brackets, matte boxes, and other accessories. The lens mount is interchangeable and can be supplied in BNCR, Panavision, or PL. It is also possible to order the camera in a super 35 format. Various ground glasses are available upon request.

Reliability

This camera, like our other pin-registered cameras, has a carefully calculated safety margin for reliability and longevity.

The 4ML and its 16mm counterpart, the 1PL, have been put to the test over years of service at the launch facility at Kennedy Space Center where approximately 120 of these cameras are in service. About 40 of these cameras are mounted in special nitrogen-cooled housings directly on the mobile launch vehicle, some literally within 20 feet of the solid rocket boosters. During the launch sequence, the cameras are used to photograph umbilical cord separation, main engine ignition, explosive retaining bolts, and 100s of other variables. The cameras are subjected to an estimated 28 Gs in all three axes and acoustic pressures up to 160 dBm. The cameras were chosen not only for their ability to survive these conditions, but for their ability to take high resolution pictures in this abusive environment.

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One Drink Minimum

Director Mike Figgis and cinematographer Declan Quinn discuss their work on *Leaving Las Vegas*, a tale of two disconnected souls who find true love in the city of neon.

Edited by Richard J. Davenport

In September of last year, director Mike Figgis (*Internal Affairs, Liebestraum*) and cinematographer Declan Quinn (*The Ballad of Little Jo, Acts of Love*) got together to shoot a highly unusual film: *Leaving Las Vegas*. They shared a frustration with the unwieldy "Hollywood" production process and a desire to avoid those methods when making this film.

Las Vegas tells the tale of Ben Sanderson (Nicolas Cage), a Hollywood development executive whose alcoholism has led the studio he works for to dismiss him. Determined to drink himself to death, Sanderson rids himself of his house and possessions and motors to Las Vegas, where he falls in love with Sera (Elizabeth Shue), a lonely prostitute who reciprocates his feelings. The duo embark upon a short-lived but intense love affair that ends in the only way it can — tragically.

Despite a "Filmed in Panavision" notice in the closing credits, the film was shot entirely on Aaton cameras. The director's own Aaton-XTRlx took the B-camera role while Panavision Hollywood supplied an Aaton-XTRprod package with lenses and accessories. The quiet, lightweight, reliable, low power-consumption aspects of the system were well suited to the particular shooting style of *Leaving Las Vegas*, which was filmed in Super 16 and blown up to 35mm.

Cinematographer Declan Quinn does not like interviews, but agreed to chat about the film with its director for his documentary about the project. The following is derived from that discussion, as well as others that took place over the course of the shoot and at an IFP/West seminar in October of last year.

Photos by Suzanne Hanover, courtesy of United Artists Pictures, Inc.

Sera (Elizabeth Shue) and Ben (Nicolas Cage) make contact amid the rich colors and moody ambience of a Vegas nightspot.

Mike Figgis: Tell us what your initial concerns were with Super 16 and the whole question of using two cameras.

Declan Quinn: In the first conversation we had, [producer] Annie Stewart filled me in on some of the things you would want to talk about. I had just done a film in Ireland and another one in New York and had had two very different experiences [with Super 16]. In Ireland, on a film called *All Things Bright and Beautiful*, I had gone through a lab called Metrocolour, and [the staff there] was very helpful. They had done a lot of Super 16 processing and were able to perform good color timing and do the best possible blow-up. It turned out fine. I had used slower stocks, and when we screened it at the cinema in Dublin everybody thought it was 35mm. The 16mm gave it a softness, but it did not look grainy or noticeably lower in quality. So it was a very good experience.

Then I did *Uncle Vanya on 42nd Street* with Louis Malle. He insisted on using Super 16. He had done a similar film 10 years ago called *My Dinner with Andre*. It was shot on standard 16mm and blown up and he was very happy with the results. His aesthetic was that *Vanya* should feel like 16mm. So we shot on Kodak's 7293, which is a kind of 'in-between' stock.

For me there are three main stocks when I'm shooting 16mm. There's 7245, which is a daylight-balanced, 50 ASA, very slow film with a very fine grain. It blows up beautifully. You don't see the grain in a blow-up. Then there's 7293, which is a tungsten-balanced stock that's rated at 200 ASA; it's a good contrasty stock and the blacks hold up well.

Just before we started shooting *Leaving Las Vegas*, the new high-speed 7298 stock came out. I didn't get a chance to test it, even in 35mm, until we shot this film. But I talked to a lot of people and everybody was really impressed with it. Actually, I used it when we did lighting tests with the actors. I rated it different ways and then blew it up to 35mm to take a look at it, and it looked great. The thing about the 98 that is different from the 93 and 45 stocks is that it has a wider contrast range. It holds shadows more, and details in the highlights, and it's very sensitive.

It's supposed to be 500 ASA, although I was rating it at 320 to get a heavier negative. If you print through a heavier emulsion you have more information on the negative to work with. If you expose a film where it's supposed to be exposed, then you will get a

fairly thin negative which, if you are not going to do any pushing, should be fine. But because we were going to a blow-up and may have wanted to darken things a little, it was better to have a heavier negative. When the negative is heavier, it's easier to hold black. That's the challenge in a blow-up: to keep the blacks black.

What you are doing is taking a 16mm negative and blowing it up to an interpositive and then an internegative. It's going through three stages before it becomes a print that people see in the theaters. At each one of these stages you lose a certain amount of clarity and definition. But more importantly, the richness and purity of the blacks and whites is diminished.

A certain amount of that is always going to happen when you blow it up, but with the slower stocks it's not so much of a problem. The grain is fine and there's more information, so it duplicates quite well. But with the faster stocks there's less grain and less information, so the blacks fall apart before anything in the dark areas.

One way that we can try to bring the blacks back for a high-speed film is to use a process called 'bleach bypass.' Once you've gone through the process of IP and IN you process the release print. But you bypass the bleach part of the processing, which is what rinses the developed emulsion off the film. When you bypass this process, it actually retains a lot of the waste emulsion on the film, which makes it denser and gives richer black. It also mutes the colors and makes it a little grainier.

MF: So after our discussions and your tests, what was your big concern about the shoot?

DQ: I really wanted to shoot a lot of 98 on this film. Knowing the problems of blow-ups, my gut feeling was to use the stock a lot and not go for a really clean-looking 35mm image. I wanted to use the 16mm to our advantage for a 'look.'

MF: How would you characterize the question of Super 16 and 35mm in terms of what people see in the film?

DQ: When you're shooting 35mm, you get your dailies and everything is so crisp and clean. Everything is separated so clearly that it tends to be unreal-looking. To me, the eye does not see that way. It's almost a glamorized view if what's in front of the camera.

The nature of 16mm, with the smaller negative, is that there is more apparent depth, which is more the way the eye sees things. And when you look at Super 8 that's magnified by 50 percent or more, you see from six inches in front of the lens to infinity.

That's part of the look of 16mm: there is more depth, which is a good thing and a bad thing.

MF: What's the bad part?

DQ: The bad part of it is that a lot of things are in focus, especially in a room where you have, say, a white wall and a neutral gray face. Things tend to 'mush up,' especially with the grain of the film. When the subjects are all sharp, they flatten. So with 16mm, I shoot wide open a lot so that the focus can separate a face from a wall.

MF: So you do get soft focus before and after the image?

DQ: Right, which is important to isolate subject matter. When that happens in 35mm, there is so much grain clarity that it tends to look hyper-real. But in 16mm, because of the grain texture, it tends to be more realistic.

MF: So, in a sense, with Super 16 we return to the way films used to look before they became so sharp and technically advanced?

DQ: Yes, I agree. I think that the Super 16 we were shooting looks like the earlier color films from the late 1950s, or maybe even some of the early black-and-white movies with the same texture.

Film stocks have gotten so good that when folks go to the movies they expect a crisp, clear image. But I think that people have gotten bored with that.

MF: I wanted to get away from that and to present an image in a fresh way — to deliberately 'degrade' the look, and make it more appropriate. To have more freedom.

DQ: I agree. In fact I was looking at an album cover last night. It was a record of an Indian woman singing in the old style. The picture they chose was a very, very fuzzy kind of picture of an old house in the country underneath a big old tree. You couldn't make it out at all; it was just two figures, a house and a tree. It was the kind of picture that you just wanted to go into. I think that by degrading the image you can actually open people's minds and their imaginations a lot more. Because you don't define anything, people can put their own little details in.

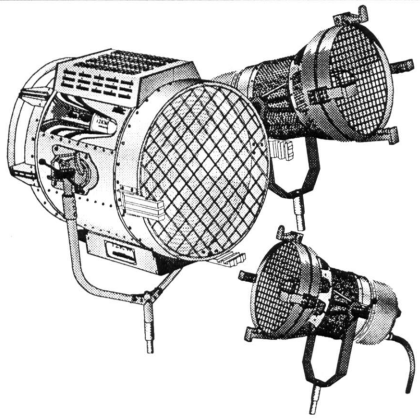
MF: This was a very quick shoot, about five weeks. How did you come up with a lighting system that enabled you to do such quick turnarounds and changes per scene? Secondly, did you feel that, as you got into the stride of the film, you became bolder and more courageous? That you set yourself limits in terms of lighting and determined when to do without?

DQ: Having shot other low-budget films very quickly, I have developed a system of sorts. You take the initial time, after rehearsals, to get a sense of the scene at hand. Then you try to design it in such a way that you know on which shots you're turning around, so you can already have lights there. You take the initial time to light for the scene rather than for each individual shot.

A system that comes to mind is one we used on the first day on the streets of Las Vegas. We had talked about trying to get a kind of portable lighting system that could track along the street with the actors as they walked and

Sera and her "business manager," Yuri (Julian Sands), have a frank discussion about her earning potential.

SILVER BULLETS!



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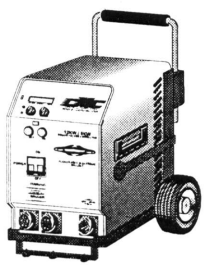

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talked, while still keeping it interesting. We came up with an insert car with a generator and a soft source, along with another kind of cantilevered source that looked like a streetlight in motion to give it a bit more dynamic look.

That was the first time we put B camera up, on day one. You went on a long lens, a 200mm I think, while I did a side-on shot of one of the scenes. My shot was a traditional tracking shot of the actors. The lighting was interesting, but we talked about B camera being a little more experimental and trying to go for something that people hadn't seen much of before.

MF: Not recently anyway.

DQ: And then we looked at dailies and saw the B-camera footage with this kind of compressed image of actors coming to us walking through light and out into silhouette. It would start with a dark profile, and then suddenly the actor would hit some light, and we would pan over to another subject. It was exciting to see that, and it became a kind of visual dialogue between you and me. It helped me to move along with how the film should look. I could take that in and make the whole spirit of what I was doing more experimental.

It's riding a fine line, though, because 16mm is such a delicate little negative, and if you screw it up you're in trouble. You simply don't have an image. So, exposure-wise, I had to be quite careful. I had to play it safe. When I saw the footage from Vegas, which was shot on the high-speed stock, I became convinced that it was the way to go with a lot of this film.

MF: What proportion do you think we shot on 98?

DQ: Probably about half, maybe a little more. 98 has its own grain structure, its own quality, so I didn't want to mix it up. Once we had shot the night scenes and settled for that look, pretty much the whole film had to have that look.

MF: It was set then?

DQ: All our night exteriors were shot on 98. Vegas kind of dictated it in order to get the lights exposed. If we had gone to 93 then there would have been a lot of occasions when the lights weren't quite bright enough and the exposure was down. You can't really do that because the blacks get really milky.

MF: What was your decision in terms of the aesthetic of how the characters would look in relation to the direction of the story? In terms of hard or soft light, color and so on.

DQ: I went through the filter book, which I quite often do, and pulled out a lot of gel colors that I considered appropriate to the story. I just have them as a reference.

This film became, gel-wise, about the night colors. There was Pale Salmon, which is a light reddish cosmetic gel. It's quite beautiful; it gives a kind of glow to people. And then there's Pale Amber Gold, which is more like a sodium-vapor light. It's a little cleaner, but it's a good compromise for street lights.

The salmon is more like the look you get from an interesting neon [sign,] so you could always motivate in a place like Vegas, which was great. With so many moving light sources you could motivate any of the colors you wanted: "Oh, they're must be a sign over there with that color on."

But I restricted the palette to the warmer tones of red and amber. To contrast it, as several of the motel locations had swimming pools, I used a kind of heavy blue every once in a while as a fill light or a little moving light. We used that in the motel areas as a 'balance' to those warmer colors.

MF: Can you talk a little about your lighting choices?

DQ: When I first started learning about lighting it was very much about soft light because of the people I worked for. But it became very limiting. Beautiful soft sources can only go so far. Then I taught myself about hard light — when you can use it and when you can't, and how it works as edge light and all that.

I've watched, over the last ten years, things go from the styles of Nestor Almendros [ASC], Vittorio Storaro [ASC] and Gordon Willis [ASC], who pretty much use soft light, to other people coming in using hard light. Films like *Batman*

are completely hard lit and aesthetically quite interesting. Roger Pratt [BSC] is another guy who uses a lot of hard light; he's someone I have a lot of admiration for.

So I've taught myself about hard light and now it's kind of an instinctive decision. Soft light tends to be more natural and then you hit the subjects with hard light where you need to put your accents. If you need to lift a bottle or an element in a scene you can set special units that will pick things out.

MF: But you need highlights in a certain direction. I assume the soft light would be pretty ambient, right?

DQ: You can make the soft light directional by using larger lights. We used Maxi Brutes and Dinos. You can get the units far back and blast them through walls of muslin or diffusion. It can still be very directional, and some people still shoot almost entirely with soft lights. So what I mean by soft light is not just bounce. Through diffusion it can be fairly directional.

Basically, a hard light is a direct instrument aimed and focused in a certain place and flagged off just to include an object or a face. For example, in the death scene at the end of our film, the curtain opens and there's a 5K outside the window that rim-lights Ben's body on the bed. Before that you really don't see it. Sera comes in and is silhouetted against the texture of the curtain, which is now backlit. You see the material pattern on her.

MF: I remember back when we watched that. The stock is so good and so sensitive that, even in the dark, you can read her features.

DQ: But when she opens the curtain, hard light comes in, mixing with the soft. There's a soft, general light and then a hard light which is just rimming his body and the bottle lying on the table. So that's a good example of a mixture of two sources. And there are both kinds of rim lights, soft and hard rim lights. But they both have a different character.

MF: So what were the choices in terms of our film?

DQ: I discovered as the film went on that Nick Cage actu-

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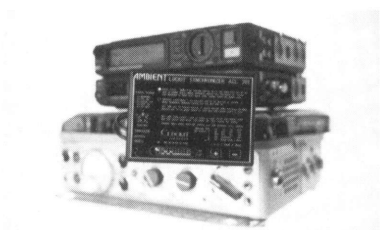

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ally takes hard light really well; most people don't. With his dark features and green eyes, the hard light really looks great on him. He's like movie star of the old style. As the film went on I used it a little bit more of it on him.

Elizabeth Shue looked good in any light. I think it's her bone structure. Especially with an actress you have to make sure that you know all the flattering angles, for both the light and the camera.

With Elizabeth it was very hard to find a bad angle. There were times when I lit her unflatteringly but it was very appropriate to the scene, like when she was in the kitchen: she was with Julian Sands sitting at the table when he's eating his breakfast. It's basically two softish light sources coming in and you can see the lines of her cheeks a little bit and it doesn't define her features. She looks appropriately tired and worn. I think there are times when it's really legitimate to light people like that, even though, in the studio system, it's not permitted. I think it really works.

MF: What proportion of the shoot would you say was handheld?

DQ: Probably about a quarter. We also used the bungeecam. Kevin Smythe, our key grip, introduced me to the system that we use now. He had worked with a Japanese music video director in New York and he came back and said 'Quinn, I've got this great thing.' And he bought all this surgical tubing and hung it off the beams; it was 35 feet up from the studio, and he just tied the camera to it. It was completely weightless for about 12 square feet. And then he says: 'Oh great, lets buy some more.' And we've been using that surgical tubing ever since.

MF: That was done with a 35mm camera?

DQ: 35mm; even with the heaviest cameras. We just use a heavier grade of [tubing] and double or triple it up. It works beautifully, like a poor man's Steadicam — somewhere between a Steadicam and handheld.

MF: I know that you were concerned about the lab back-up with Super 16. You also had misgivings regarding the second camera.

DQ: Sometimes you have a second camera and the director wants to operate another angle, so you put that camera up. Then the actors need to talk to the director over there, and so makeup goes over there and the 1st AD starts standing by the director's camera and it suddenly becomes A camera. There will be a big shift of focus. It's happened to me on a couple of occasions.

It's quite frustrating, because the thing that you've lit more precisely becomes B-camera angle. Then you're going for more mediocre lighting and including more than you should be on the B camera, or the director is.

But you and I talked about that and you assured me that you would wait for A camera to be up and then bring in B camera wherever there was a hole for it.

It proved to be the best experience with a B camera that I have ever had. In fact, in dailies I was looking forward to seeing what B camera shot because I knew it was sometimes going to be a lot more interesting than the A camera because you were floating and experimenting with a tighter, moving shot — finding things. There were times when the B camera could play the whole scene the way it was shot. I didn't find that a threat; I found it nice to have that option.

There's a very good example in the death scene. I don't know exactly what lens you were shooting with, but you had the B camera. I saw it in dailies and was stunned by that close-up of Elizabeth as she comes in the door. You can still just see her in the milky black and then she comes against this texture of the curtain and then into this shaft of light that's moving a little. The light was really beautiful on her.

We had no other shot of her like that in the film, which was delightful because we needed a fresh image of her at that point. It almost plays as Nick's dying point of view of her as an angel — which was actually something he pointed out to me.

The interesting part of it was that I thought it worked as a directing tool for you as well. You were able to watch performances, almost as if through binoculars. I

thought it brought you into the scene more.

If you love the image and you love texture and color, then watching on a black-and-white monitor is depressing. That's why I like operating. Although occasionally, if it's a crazy schedule and there's a lot of pre-lights, I'll get an operator.

MF: One of the things that I enjoyed about this shoot, that I haven't experienced recently on others, comes from my theater background. The basis of every show that I would do would be that I would create a space, an environment, and light it. The actors should know where the lights are so that they can play the dark or they can play the light. You give them that space to work in rather than saying, 'You will hit this mark, you will say this line.' Which, of course, has created some fairly acute technical problems from a focus-pulling point of view. But there were very few days on this project where I felt that the actors were restricted and that, therefore, I was restricted and couldn't change something completely.

We would go through a rehearsal and I would never, ever promise that [the blocking] was definitive. It was merely a starting point.

Richard Davenport: Were there any references, films or photographs, that the two of you used in planning the look of this film?

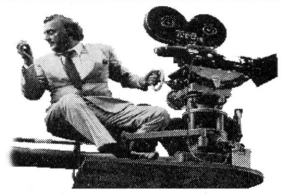
DQ: There weren't any strong visual references. We looked at part of one film, *Time of the Gypsies*, right at the beginning. It just had a kind of an atmosphere to it that was interesting and that all of us clicked on.

MF: *The Killing of a Chinese Bookie* gave us a lot.

DQ: We also watched and talked about Godard's *Alphaville*. Then there were some photographs in a magazine that we looked at — moody, bedroom photographs of people sitting on their beds, which had a great look to them. Those were just right for our film.

This article is dedicated to the memory of Louis Malle.

"For me, directing films is like having sex; when it's good, it's very good; but when it's bad, it's still good."



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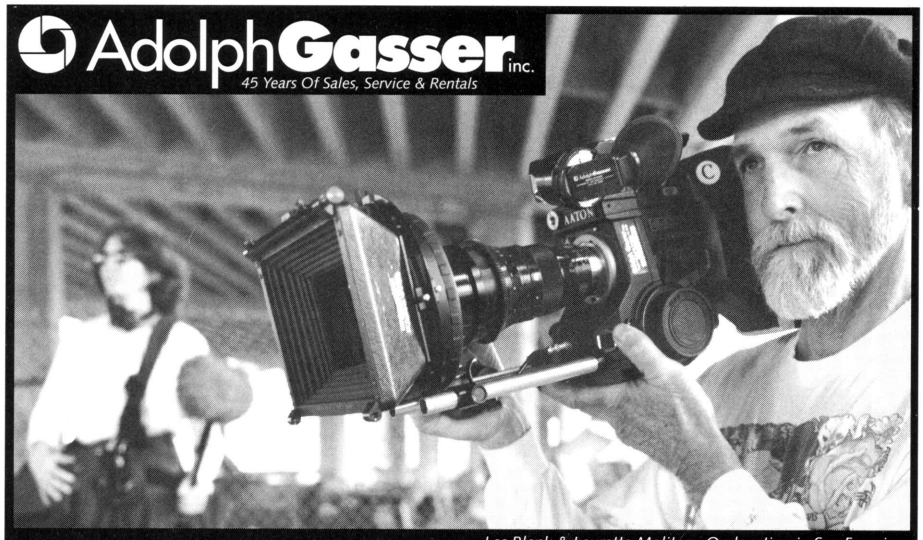

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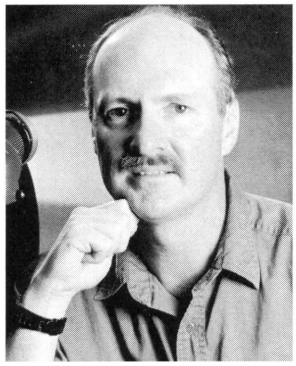

"This camera is rugged.

The 435 was hit by a car and knocked onto the sidewalk but we were able to continue shooting. Obviously, the camera body and internal components are extremely rugged."

William Bennett, DoP

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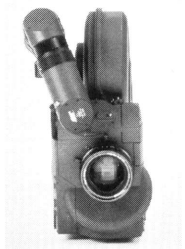

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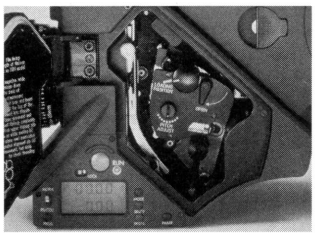

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Stormy Weather

Director Ridley Scott and feature-debut cinematographer Hugh Johnson seek out scenic locales and big water for *White Squall*, a true-life tale of tragedy and accountability on the ocean waves.

by David E. Williams

Photos by Phil Bray, courtesy of Hollywood PicturesCompany.

"IT'S ABOUT A TIME IN THE PAST that will not return, the last vestiges of innocence, if you like," says director Ridley Scott of his latest film, *White Squall*, an adventurous yarn about a sailing expedition which encounters dramatic misfortune. "The rite of passage has evaporated today, so I felt it was worth refreshing people's minds that this did once exist. I hate to sound cynical, but in most walks of life today, it really doesn't anymore."

Actor Jeff Bridges (who plays the captain of the ill-fated* Albatross*), cinematographer Hugh Johnson (center) and director Ridley Scott confer in Charleston — one of the production's many locations. Johnson credits Bridges' willingness to perform many of his own stunts for an added degree of realism in the storm sequence.

The truth in Scott's words plays well against this film's story, which is based on a real incident. In 1960, 13 young American men joined the Ocean Academy, a rigorous floating prep school held aboard the *Albatross*, a square-rigged brigantine, and set sail into the Caribbean with their four teachers. On the journey home, after a lengthy voyage of learning and self-discovery, the ship was caught in a white squall, a freak storm which quickly capsized and sank the tall-masted vessel. "It's like a micro-burst," describes the director. "In essence, it's a tornado or a hurricane over a short distance that pushes everything in its path flat. During the actual event, they went over in 90 seconds and sank in 90 seconds." Despite their training and heroism, four students and two Academy crewmembers died, including the captain's wife. The rescued survivors then had to grapple with the question of accountability. Was the captain responsible? Had he properly prepared his crew? Could he have averted the disaster?

The story's inherent combination of scope and drama offered Scott a unique opportunity to apply his skills as a visual storyteller.

Unlike many directors who have developed a signature cinematic style, Scott has continuously chosen to employ different cinematographers, a group that includes Frank Tidy, BSC (*The Duellists*); Derek Vanlint (*Alien*); Jordan Cronenweth, ASC (*Blade Runner*); Steven Poster, ASC (*Someone to Watch Over Me*); Alex Thomson, BSC (*Legend*); Adrian Biddle, BSC (*Thelma & Louise, 1492*) and Jan DeBont, ASC (*Black Rain*). On the subject, Scott ponders, "Does it make more sense to keep using the same team? If you get someone you really like and you're on the same [wavelength,] like Oliver Stone and Bob Richardson [ASC,] it works very well. But I've never followed that path for some reason. Working with new individuals is a challenge, so perhaps I give myself new individuals each time to sustain certain creative pressures."

But *new* does not necessarily mean *unfamiliar*, and Scott has regularly partnered with cinematographers he has previously worked with on commercials. For *White Squall*, Scott has again looked within his own team, to Irish-born cinematographer Hugh Johnson, a veteran commercial cameraman-director he has known for 27 years — though this film auspiciously marks his feature debut as a director of photography.

Remembers Johnson, "I first met Ridley and his brother Tony in the 1960s while working as a trainee at a commercial house in London for Derek Vanlint. Ridley had changed the whole look of commercials and how they should be made."

After gaining experience working for the Scott brothers on many commercials, Johnson served as a camera assistant to Frank Tidy on Ridley's first feature, *The Duellists*, and later to Stephen Goldblatt, ASC on Tony's big-screen debut, *The Hunger*. The latter gig provided him with the opportunity "to photograph some second-unit stuff Tony wanted. The next think I knew, I was lighting and photographing commercials."

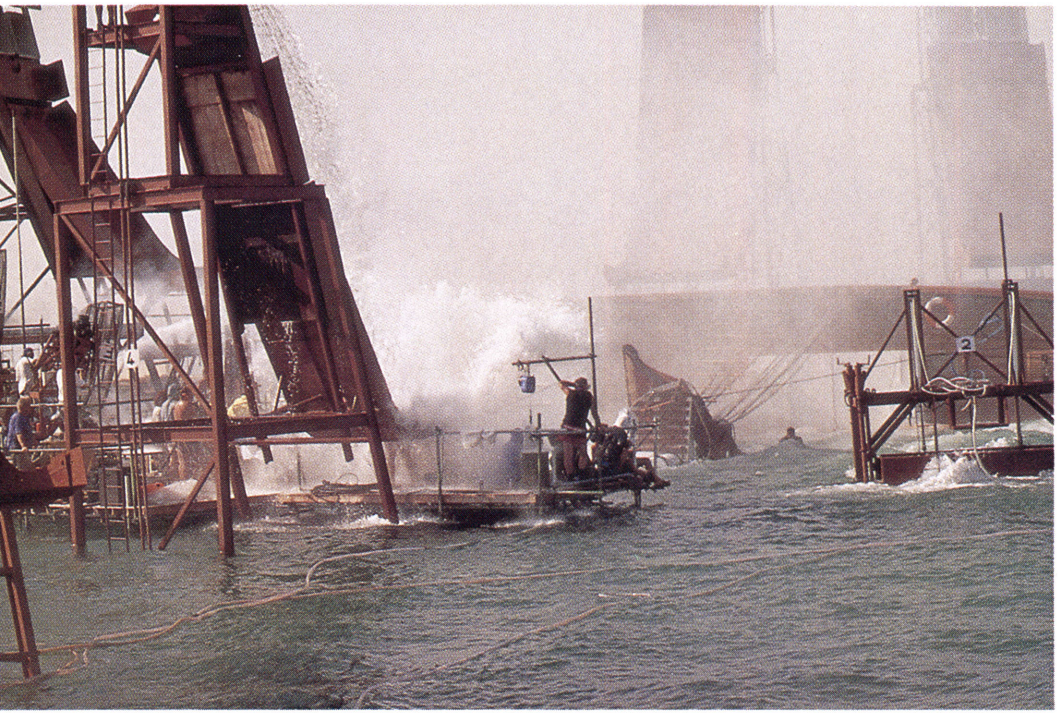
After many other commercial and feature projects, Johnson was convinced to join the Scotts' production company, RSA, as a director-cinematographer. Ridley Scott later asked Johnson to direct and shoot the second-unit sequences for his Columbus adventure, *1492: Conquest of Paradise*. The director subsequently brought Johnson in to shoot his planned virus-thriller *The Hot Zone*, based on the best-selling book, but the project disintegrated before a script could be finalized. The cinematographer recalls, "Ridley came to me directly after that and said, 'Do you want to have a go at another one?' I said, 'Yeah, sure.' That's when *White Squall* came up, so I read the script and came aboard."

Says Scott, "Hugh's done a lot of feature films as an assistant, been a well-known commercial director now for almost 10 years and is getting close to directing his first feature. I think he figured, quite wisely, that [shooting *White Squall*] was a good way to get right in it and look over my shoulder. I thought at first it would be difficult, because he's a director and might say, 'Why doesn't she do this, or he do that?'" Laughing, Scott adds, "But he never did that once, which I was very grateful for!"

Contemplating this learning process, Johnson says, "I've basically been brought up in the 'School of Scotts.' So in a way it's not very difficult to photograph for Ridley because I know what he likes, and I like the same things — although shooting features is quite different from commercial work. You're really dealing with actors and a story."

Scott submits, "I never thought I'd go back and do another sea story after *1492* because that was a pain in the ass. Then the script [for *White Squall*] came floating past and we picked it up. It was the strength of the story that brought us back to revisit the sea.

The ship goes down. Whipped into a whitecap fury by the 600 m.p.h. winds produced by the effects department's jet engines, the film's storm was primarily staged at a tank facility on the island of Malta. Jokes Scott, "I've never worked out to this day why when you switch it on, the jet engine doesn't just take off and disappear over the horizon!"



Above: ***The huge tank complex in Malta featured wave machines and an array of five-ton tip-tanks on 120' sloped towers, which produced a significant surf when sequenced. The ship, configured on a 70-ton gimbal, could be capsized repeatedly.***
Right: ***The young actors portraying the ship's student crew collect around a mobile platform used to get the camera out into the storm action. Shooting from low angles allowed for the use of the natural horizon line. Waterproofing the Panaflex cameras proved difficult, with Johnson's assistants resorting to plastic sheeting and plenty of gaffer tape.***

On *1492*, we never got rough seas, but in this instance, I knew I would have to explore every avenue of water."

Plotting a Visual Course

"If there are seven characters in a film, I treat the environment as the eighth character — or the first," says Scott. "After all, that's the proscenium within which everything will function. If the central character walks outside and you look at the city and think, 'Wait a minute, I don't believe this story could exist within this environment,' then the film becomes lightweight."

One would imagine that such a focus on imagery would make life difficult for Scott's cinematographers. Confirms Johnson, "It's demanding, but if you're brought up with him and you know his work, it's possible. However, *White Squall* is not a Ridley Scott showpiece where everything is visually perfect. This movie is about young boys at sea, it's about what happens. The photography isn't waiting for this beautiful or magic light; it's very natural in an acrid way. Early on, Ridley and I felt that the film should not be cosmetic in any way. We wanted to shoot in hard light, in the weather we had, so you had the feeling of heat and warmth around the film. It's quite raw, really, especially during the boat sequences."

Johnson's descriptions in some ways recall cinematographer Dean Semler, ACS's approach on *Waterworld* (see *AC* August 1995). However, while that production relied heavily on Steadicam work to dampen the effect of the ocean waves, Johnson and Scott "decided not to fight it," the cameraman reports. "We went with the motion that made it look good. If it felt good in the action, in the scene, then we enhanced it or we came back on it. We never worried about the horizon. You'd probably think about it and say, 'My God, the horizon's moving all over the place.' But when you actually see it on the big screen, it doesn't worry you at all."

Another similarity between the two films is the presence of a tall-masted ship, a vertical shape that prompted Semler to shoot *Waterworld* in 1.85:1. But Johnson again took another tack, going with 2.35:1 anamorphic. He explains, "The anamorphic frame gave it a big scale, a big feeling you get with the boats. And for what we were doing, 1.85 might have seemed claustrophobic."

Says Johnson of the filmmakers' other research, "We related back to some old films we both liked. We looked at *Mutiny on the Bounty* [1935] and were interested in anything having to do with boats and what has and hasn't been done."

Scott offers, "The original *Moby Dick* was really good, particularly the sea footage of the whalers with their harpoons in the long boats; I could never work out whether it was real documentary footage or whether they'd shot it. I compiled a lot of documentary footage and started to watch water, just to see how it behaved, to try and get around the curse of [shooting in] a tank. Because in a tank, even with a wind machine, you've only got three-foot waves."

Yet the cinematographer confesses, "I think we threw everything out and just got on with it. I don't think any advantage was had by looking at other movies, because Ridley always goes for what he wants."

Ports of Call

Feeding Scott's eye for authenticity, the *White Squall* production shot almost entirely on location, beginning around the Caribbean islands of St. Vincent, St. Lucia and Grenada, which portrayed the sites that the actual *Albatross* crew visited before their disaster. The English crew then traveled up the eastern American seaboard to the cities of Charleston and Beaufort, South Carolina, where the post-storm portions of the film would be shot on practical

locations and sets built by production designer Peter Hampton and his team within a converted warehouse-studio. The storm and sinking of the ship would later be staged in a huge tank facility on the Mediterranean island of Malta. Located just south of Sicily, the sprawling complex was recently utilized for the pirate adventure *Cutthroat Island*. Additional miniature work, also photographed by Johnson, would be done in post-production in order to bridge and expand on footage from both the Caribbean and Malta shoots.

However, as Scott laments, "We found no rough water in the Caribbean. It was like a damn mill pond." The director finally determined that the planned 17-minute storm sequence would not be convincing without authentic "big water" shots, and changed course to shoot additional footage off the tip of South Africa. Fortunately, the weeks spent in Malta and preparing a rough edit in England gave the *Eye of the Wind*, the 240-ton, 110' topsail schooner portraying the *Albatross*, time to cross the Atlantic. There, Scott says, "We found big, big sea."

Under the Caribbean Sun

While *White Squall* was shot on numerous island locations, taking advantage of the region's natural beauty, "the most difficult situation was on the boat," says Johnson. "You'd have good light up until 8:30 or 9:00 a.m., and then midday sun until about 4:00. Then it would start to fall again at about 6:00. The problems I had were actually in between those hours, and it was made more difficult for everybody because that was also the hottest part of the day — in the 90s.

"After the first four days, we'd covered the boat. We had to make it look different, but it was like being stuck in a room, really. You question some of the angles and say, 'We've done this one before.' But you make it work." Johnson used diverse focal lengths to elicit visual variation, though even that practice was restricted. He explains, "We didn't bother using long lenses because the picture didn't call for them, and we didn't have the distance to use them on the boat. I had a set of Primos and a set of Es, but Ridley loves zooms and will ask for them all the time, so we relied on the 40-200mm and 50-500mm Primos, which worked quite well. We used primes sometimes, but just for establishing the scene. I really liked the 40-200mm; you could shoot the whole movie on that. I don't particularly like using zooms on interiors, though. Shooting anamorphic, you've got to build up your stop, but there were times when we couldn't because we were only able get a certain amount of light into the scene. So we would be on the primes. But I was surprised at how good they were at the stops I was shooting with inside — down to the bottom of the lens.

"Our favorite focal lengths were probably the 40, 75 and 100mm. Whenever we checked the zoom, it was back to the same old sizes. I always liked putting on the 40mm, as much as some cinematographers would hate it. For the big screen, I like a wide angle. It gives you a lot of production, so you can dress things in and get a lot of foreground and background action going on."

Johnson covered the picture's varied shooting situations — from the sunny Caribbean to the hurricane-like storm sequences — with Kodak's 5298 and 5248. "I actually did consider 45, but I don't particularly like the way it photographs in bad weather," the cinematographer notes. "I feel that it goes quite flat when you don't get hard sunshine. The 48 also works very well with the 98, which has plenty of latitude."

Johnson was flexible in how he rated the stocks. "My assistants laugh at me because I vary. I'm not one of these conventional guys," he says with a laugh. "I was brought up with some wonderful old guys, like Ted Moore, when I was a camera assistant. They always used to tell you that you

Top: ***Johnson (facing camera) and his crew faced big seas off South Africa's Cape of Good Hope, where Scott managed to get the intermediate storm footage he needed. Both cameras are set in Libra II mounts, which could be panned, tilted and rolled to further accentuate the waves.*** **Below:** ***The actual ship used to portray the*** **Albatross** ***offered minimal space and power during the Caribbean segment of the shoot.***

Production designer Peter Hampton's large courtroom set was one of the few built for the primarily location-shot film. He coordinated with Johnson for his window placement, resulting in a side-lit space which could make good use of a Venetian blind effect.

should place the stop where you think it's best for you. I always find that I still work that way. It would vary partly because I was using some filters — a very light coral, like an eighth. Sometimes I would go to a quarter, but no more. So I would just change my meter for that. I rated the 48 at 64 ASA [with an 85], but I varied with the 98, anywhere from 320 to 500."

Johnson added an array of filtration to offset the strong Caribbean sun. "I don't like to shoot past f8 in anamorphic or spherical," he states. "We were out there between 16 and 22 ½ sometimes, and most of the time I'd bring that down to about an 8. That's a nice average stop where the depth of field is pretty good and things are reasonably sharp. It also gives the camera assistant a good chance as well. I'd bring a lot of NDs in, and also used a lot of Pola screens. A lot of cameramen like to give them two full stops, but I'd do 1 ⅔.

"I didn't use any grads, except maybe once in the storm sequence when the sky was quite hot. Ridley and Tony are definitely known for using grads, but you get to a point where you've got to change a little bit. Also while we weren't worried about the horizon moving up and down, if people saw a grad in there as well on the big screen, they'd say, *'Oh my God!'*"

The confines of the *Albatross* hampered lighting even more profoundly. Says Johnson, "The only lights I had on the boat were two 4K HMI Pars. That's all I could have because there were only two small generators aboard. We had a 40K and a 30K; one powered the entire craft and the other was for lights." (It was decided that running power from a support boat would slow down the schedule.)

"There were times when I did put up a canopy, but only for a few scenes. I didn't like the look; it was almost too contrasty for what we were doing. Besides, if we were out there putting diffusion all over everything to get soft light, it wouldn't have been the Caribbean anymore. We'd have lost that feeling of ruggedness. So it was nice to get the natural shapes through the boat, get the whole structure of the boat going from light to dark and shade to light."

However, not beaten by their cramped situation, "we tracked an awful lot on the boat," says Johnson. "I suggested to Ridley that we make the camera move as much as possible. It was difficult for the crew, but it worked extremely well. We had a Pee Wee dolly and got it into very narrow places on normal track. The trouble was leveling it off all the time, because the curvature of the boat goes from one end to the other.

"On some of the boat stuff, we also used a Libra II mount, which was very impressive. Now, when I saw that being rigged up — and it takes a little time to be set up — I said to myself, 'This is going to take up all my lighting time and we're not going to get the material we want.' But it worked really well and gave us the shifting horizon we wanted to enhance the movement of the boat."

A three-axis stabilized mount, the Libra II was used to great effect on *GoldenEye*'s car and tank chases (see *AC* December 1995). The mount attaches to a female Moy fitting. Using rate and pendulous horizon sensors, the Libra can allow for a variety of pan, tilt and roll effects — making it possible for Scott and Johnson to have either a slightly undulating background, with the boat itself heaving in the foreground, or a fully stabilized background.

Says Johnson, "The Libra is controlled like a hot head. I think [the manufacturing company, Megamount] is building one for the Panaflex, but the one we had was designed for the Arri III, and it worked extremely well. The camera itself was modified to use all our Primo and E lenses."

In their search for new ways to shoot the action aboard the *Albatross*, the filmmakers resorted to other measures as well. Finding some extra time in their schedule, Scott decided to try to shoot interior scenes on the ship, rather than wait to use the set built on Malta. "The boat downstairs was a great-looking, but photographing it was extremely difficult," Johnson recalls. "Ridley would come down and say, 'Hang on, let's look at a 40mm here.' And I'd say, 'Yeah, put a 40 on, where do I put my lights?' You know, a 40mm in anamorphic is about a 20mm in spherical. But Ridley would say, 'Let's go for it, Hughie.' So we'd do the shots and we'd look at dailies. That was the other thing: we'd never get dailies until five or six days later, but Ridley would always check out the footage and say, 'See, it looks great!'"

Landing in South Carolina

After five weeks in the islands, the company traveled to Charleston, South Carolina and shot there for about 2 ½ weeks. Of primary importance was a "court of inquiry" sequence in which the captain of the *Albatross* would be questioned about the fate of his crew — and faced by his surviving students. The beautiful old museums and other historic landmark buildings they were hoping to use had the usual restrictions against

painting and reconstruction, so the courtroom was built in a warehouse just outside the city.

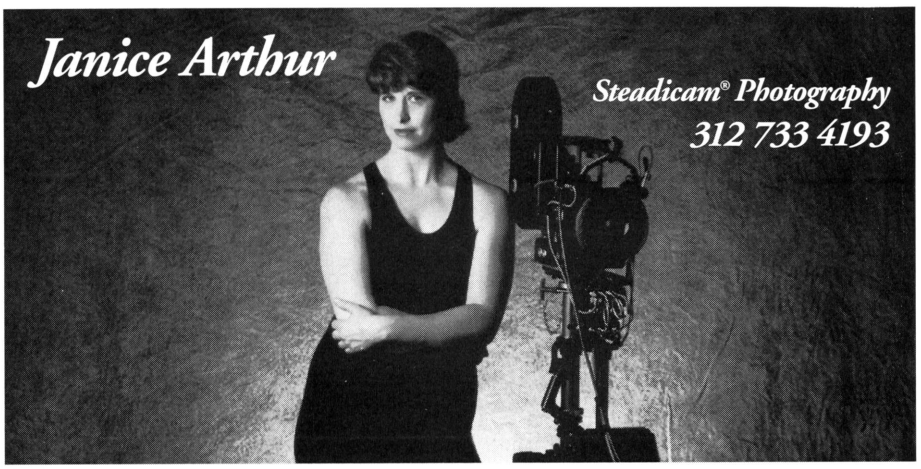
Production designer Peter Hampton, another veteran of Scott's commercial work, as well as *The Duellists* and segments of *Blade Runner*, was unexpectedly faced with a major construction effort — and the dilemma of supplying Johnson with space for his lights. Says Hampton, "That set was the biggest problem on the film, but it was the only answer after we couldn't find a real location — and at least it gave us a chance to plan the lighting a bit. That's terribly important to the design of any set. You have to know where the windows should be in relation to the camera and the scene. But the set was also important because in the film it immediately follows the shipwreck sequence; it had to hold up against that drama, so the lighting had to be dramatic and look good."

"The roof on that particular warehouse sloped down," says the cinematographer, "so Peter built it right up to the ceiling. When I came in and saw it, I said, 'Where am I going to put my lamps?' But we worked at it together. It was the first time we really got into a set where one could move walls and light properly. In that respect, it was nice after being stuck on boats and different locations for quite a while.

"I was a little disappointed because I expected the light in Charleston to be absolutely amazing. That light over there on the east coast of America can be fantastic, absolutely stunning — but it was like Dullsville for our week of exteriors there. Still, it worked out very well because it brought us away from the hot sun we'd had in the Caribbean, so we wouldn't just have sunshine, sunshine, sunshine."

Storming Malta

Scott approached the shoot in Malta cautiously, recalling the films he and Johnson had screened during preproduction. Says the director, "I noticed that everyone keeps the camera still and shoots the sea, and there you have it — three-foot waves, with wind machines going and a lot of



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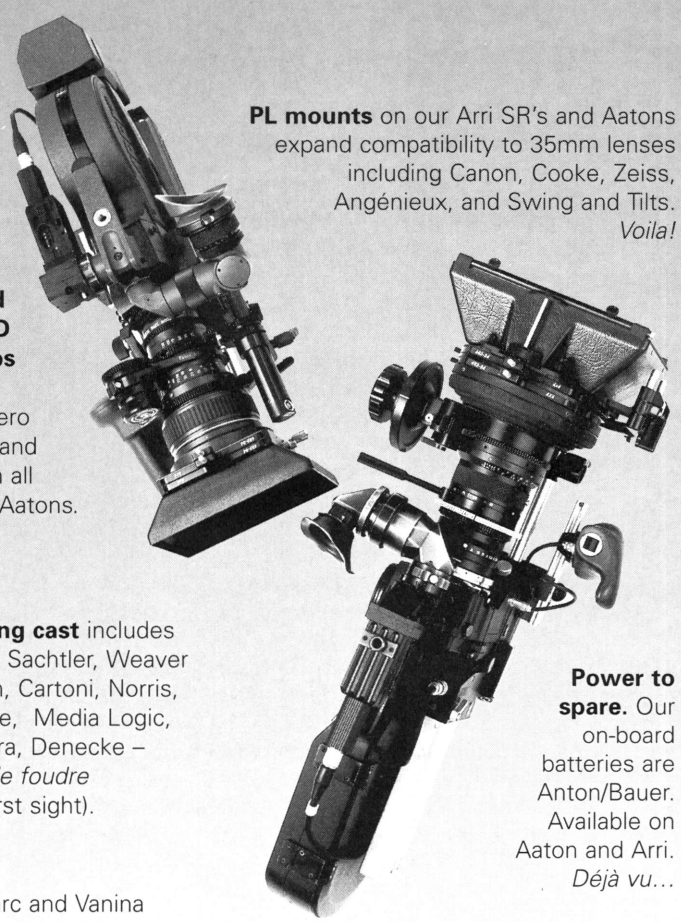

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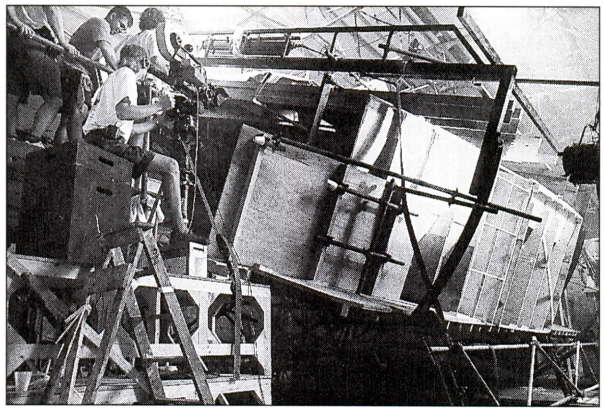
Above: ***Practicals played a large role in lighting the ship-sinking and underwater scenes shot within the*** **Albatross** ***interiors built in Malta. Johnson notes the danger of dealing with electrical equipment in such an environment.*** **Right:** ***Set on a gimbal, the central cabin set was later situated in the tank, where it could roll 360 degrees and fill with water. Scott describes it as "very successful and truly claustrophobic."***

people rushing around tip-tanks. And the storm sequences tended to develop into very swiftly-cut montages where you don't know what the hell is going on. Therefore they get the storm sequence out of the way as quickly as possible. What I wanted to do was sustain the storm sequence as a drama in itself, which of course it was."

Johnson notes, "By the time we got to Malta, the bulk of the movie had been shot. We were doing the sinking of the boat, the flooding of the boat and the underwater sets. The tank facility was built there way back in the Sixties, and this was my fourth picture working there. We'd done *Orca*, *Sinbad and the Eye of the Tiger* and *The Martian Chronicles* there."

"The tanks are *huge*," remarks Scott of the Mediterranean Film Studios complex. "They're like two massive football fields. One was about six million gallons and 40 feet deep and the other was three million gallons and only eight feet deep, with a deeper part that was 18 feet. You don't want the tank too deep, because then every damn thing has to be moved around on scaffolding, which slows you down. So you don't need more than about six or seven feet once you get your ship in the middle pit, where your big gimbal is."



Designed by Les Tomkins and effects expert Joss Williams and overseen by Peter Hampton, the *Albatross* was reconstructed in sections. Describes Scott, "We built just over half the actual schooner with its full rig on a 70-ton gimbal which could tip at 90 degrees in about six seconds. To continue the roll, there's another long gimbal, about 40 feet long, which takes in the whole corridor running down the center of the ship. And there's the front portion of the boat where the boys are bunked, which would do nearly 90 degrees on another heavy gimbal."

Situated around the tanks were a series of towering tip-tanks, each holding up to five tons of water, and several wave machines, which could churn the tank into a medium-sized surf. Built from the edges were a series of moveable catwalks for camera placement. However, the director also had a secret piece of storm-making equipment to help power the synthetic tempest. Scott recalls, "I'd done a commercial just before we started shooting, and my special effects guy had turned up with an engine from a Navy jet, which gave me a wind of 600 miles an hour! We found two in Europe and rigged both so we could pan and tilt them. That force took the waves, which were only 3 ½ feet high, and whipped them up into this white foam I've never seen before. The engines had to be pulled back because they would burn you if you got too close."

Despite this preparation, the method for shooting the storm sequence still had to be worked out. Says Johnson, "Ridley and I had some long discussions about where it was going to be, how it was coming, where it was coming from, and photographically how it should look. He wanted a storm nobody had ever seen before. So we decided to do some tests."

The trials would also determine whether the scene would be shot at night or in daylight. As darkness would obviously help hide the tanks' limitations, the first were done at night.

Says Johnson, "I put up a couple of big Wendys and we did some tests with the actors. But it was too theatrical and too much of a contrast from what had been done before. So we decided to do some tests during the day, in the latter part of the afternoon. When we got the dailies back, we decided that the day was more interesting, and a lot better for photographic reasons. Besides, it can be quite cold in Malta at nighttime during that time of the year."

The tests also helped determine how to overcome the limitations of the relatively puny curls produced by the wave machines.

Says Scott, "In heavy seas, if you're in a 30- or 40-foot wave motion, the walls of water have waves on *them*. So what we discovered was that by gimballing and generally moving the cameras, the three-foot chop created by the wave machines looked like chop on the sides of walls of water. So we kept the horizon changing all the time. Consequently, there are shots where we run for 10 or 15 seconds, with no problem at all."

Says Johnson of shooting the storm, "We had the cameras on dollies, we did handheld stuff, we had them on rigs, on cables; we used every device you can think of. We also had a crane set up to get in close into the boat, a Titan arm, with a very long extension and a hothead. It was a lot more controllable than any kind of flotation for the camera."

Yet despite their efforts, Johnson says that the filmmakers always found themselves "coming back to the same angles on the boat, primarily because we had a land mass to the right and left of the tank as we looked out to sea, our natural horizon. We used quite a lot of smoke, rain and water effects just to hide it, because we didn't want to get into too much expensive CGI work. So we didn't have a lot of clarity there or a lot of depth. You'd be looking through the camera and not seeing a thing! But I just went for it, and as we saw the dailies, we learned more. Photographing something you can't see with the bare eye is difficult, but you know you're on to something when Ridley's there saying, 'Loving it!'

"Still, photographing through all of that was tricky, with our exposures fluctuating anywhere between f22 and 11. As far as lighting was concerned, I just used some lightning effects. I would bank in some Brutes at the end of the day, when the light would start to go a little bit, just to give an overall form to the sequence. But they weren't doing that much. Again, the tank situation was restrictive because moving lamps and equipment around the boat would take up too much production time. But the sun would break through every now

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Stages

STAGES	Length	Width	Height	Sq. Ft.
1	100′	92′	29′0″	9,200
3	154′	80′	27′2″	12,320
4	154′	69′	27′10″	10,626
5	139′	64′	23′4″	8,896
6	139′	63′	19′10″	8,757
12	199′	146′	49′2″	29,054
12W-Fire	99′	68′	28′2″	6,732
16	144′	80′	28′8″	11,520
17	144′	70′	28′10″	10,080
18	144′	74′	29′1″	10,656
19	144′	74′	27′10″	9,934
20	144′	74′	27′1″	10,656
22	157′	74′	27′0″	11,618
23	157′	76′	28′1″	11,932
24	157′	112′	33′4″	17,584
25	157′	112′	33′4″	17,584
27	199′	99′	39′10″	19,701
28	142′	98′	43′11″	13,916
29	141′	97′	30′0″	13,677
30	141′	88	30′0″	12,408
31	141′	97′	30′0″	13,677
32	141′	89′	30′0″	12,549
33	99′	69′	25′0″	6,831
34	99′	69′	25′0″	6,831
35	99′	69′	25′0″	6,831
36	99′	69′	24′11″	6,831
37	140′	100′	30′0″	14,000
41	140′	102′	30′1″	14,280
42	140′	102′	30′0″	14,280
43	140′	102′	30′3″	14,280
44	140′	102′	30′0″	14,280
747	139′	59′	21′2″	8,201
TANK		25′ Dia.	15′6″	491

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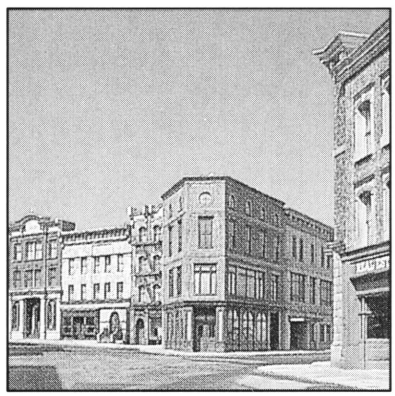

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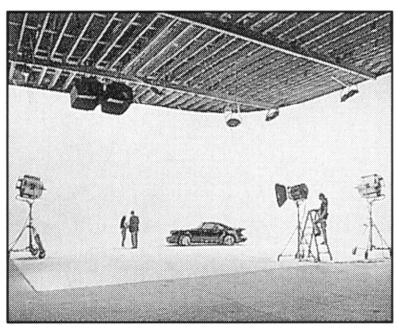

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and again, so I was getting enough fill from that.

"We'd probably do three setups a day, which was pretty good considering what we were going through. Just to move one of those big tip tanks or a wave machine could take anywhere from a half-hour to three hours: we had to be very positive about where we wanted one. Fortunately, we were working with a very good assistant director, Terry Needham, and he was very much in control of that."

Underwater portions of the storm scene, in which the students are trapped below deck and try desperately to escape death, were shot in the deeper tank. Scott recalls, "The internal boat sets were built on gimbals that would roll 360 degrees. As they turned over, they filled up. We would shove the guys in there and shout 'Action!' It was very successful and truly claustrophobic."

> "The cameras were not only getting wet, but they were *in* water, with tons of water coming down on top of them."
>
> — Hugh Johnson

Johnson adds, "Those shots were quite difficult in the sense that you're dealing with actors in the water with a lot of practical lamps. I let the practicals do all of the lighting and I kept it very low-key. We had an excellent underwater guy from Los Angeles, Pete Romano [of HydroFlex], who did a wonderful job. You're quite restricted in what lenses you can use on the underwater camera. I think all we could use were the 30, 35 and 40mm close-focus Es."

During the five weeks spent shooting the storm sequence, the issue of keeping camera equipment functioning became increasingly important. Johnson says, "We brought one of our technicians out from London, whom we desperately needed because we were really beating up the equipment. The cameras were not only getting wet, but they were *in* water, with tons of water coming down on top of them. Panavision came up with a lot of sophisticated stuff to keep things dry, but it never really worked. So we went back to basics: plastic bags. [Laughs] It's a bit of a pain to reload cameras or change lenses — you have to strip it all down, take the bags off, undo all the gaffer tape, and then do it all over again, but it works."

Equally important was that the actors and crew could stand up to the same degree of stress. As Johnson reports, "Every day we'd fill the place with smoke, we had jet engines, we had lots of water effects; they were put through hell. You can't imagine what those jet engines can do in the water and how it affects you."

"The jet engines saved the day," counters the director. "In fact, I'm buying them for [Shepperton Studios in England, which the Scott brothers recently purchased]. Propeller fans are good for certain things, but if you really want storm stuff like this, you've got to have the jets. But what we got out of Malta was terrific. It's very much a studio situation, and it's the best water facility I know of."

Waves Off the Cape

The calm weather encountered during the Caribbean shoot was in fact a disaster of sorts for the *White Squall* production, which was counting on some rough seas for the storm sequence. "It's Murphy's Law," admits Scott. "We had wrapped the ship and the skipper was going back to Portsmouth, but we said, 'Listen, here's the bad news. We want you to go down to the Cape of Good Hope." He said, 'Oh, no,' but he did it.

"It would take him three months to get to South Africa. So after a month in Malta, I went off to Shepperton to edit for two months while he was chugging down the coast of South America. He arrived six days before we did with a small camera unit. And since we had a good edit by that time, we knew exactly what we needed."

"The first day we went out was probably our best," says Johnson "It was really the kind of weather conditions we wanted — dark skies, breaking sunlight, high seas, the boat rolling . . . it was fantastic. But everybody got seasick. Ridley, my first assistant, one of the grips and I were the only survivors. Still, we were very lucky with the light down there and we got some spectacular footage. Using the Libra made the waves seem even higher."

Says Scott, "Because the crew was so well-versed by then in terms of leaping around this boat and getting camera positions, we actually dealt with it pretty easily. We got some big, big water for what I call the intermediary stuff, and then the big storm was entirely created in the tank [in Malta and at Pinewood] and with models.

"The biggest problem at sea was all the actors on board. You're on the high seas, and if somebody goes overboard, you just never pick them up. By the time you turn around there's just this little head bobbing around in the water. We were very careful about that. We only experienced maybe 35- to 40-foot waves, and they weren't curlers, so they rarely broke on the deck.

"But I think we were even more successful than we could have been, because the storm was always a worry. It's one of those things you stick in the back of your head, thinking, 'Well, experience will tell if we'll be able to pull it off.' But I was always worried about it."

Dropping Anchor

Enthused about his trials on *White Squall*, Johnson concludes, "This is the first movie I've photographed all the way through, and it was a great team of people, a great team of actors, and a big experience for me. When I went to directing commercials, I thought that was it, that I'd never get a chance to photograph a movie. But Ridley and I are talking about shooting another feature, which should be quite interesting. It's a totally different subject altogether."

That project is the thriller *G.I. Jane*, starring Demi Moore as the first elite female U.S. combat soldier. "I've photographed some beautiful women in my time, and it'll probably be a lot more controllable than rocky boats," Johnson quips with a laugh.

For his Arizona-based commercials, Director Bill Linsman rented Clairmont Camera equipment over 200 times without his crew ever prepping it in L.A.

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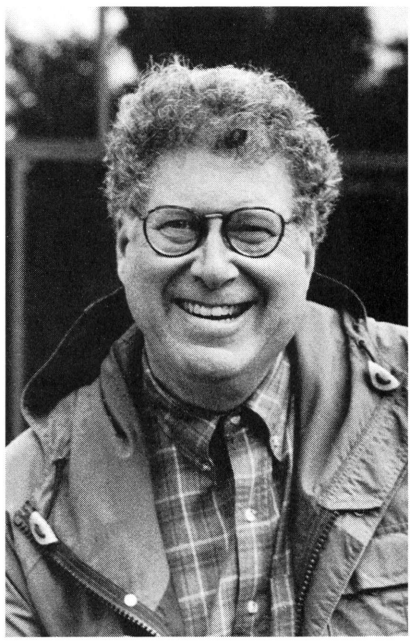
Quality

"However, getting L.A. quality has always meant hiring Hollywood actors and Hollywood DPs – the best. No problem there; Phoenix is a 55 minute flight from Burbank. It has also meant always renting camera equipment from Hollywood."

Trust

"In the early days, I would ask each DP where he preferred to rent. His preference was something I relied on heavily at first. Air freight costs money. To offset that, it would help if we didn't have to fly to L.A. and back to prep equipment. I needed a rental house I could trust to prep it for us and to ship everything to Phoenix on time and with no pieces missing."



Routine

"And I needed that done routinely at least once and usually twice a month. Most of those early DPs told me their first choice was Clairmont. They were Clairmont regulars; fairly soon, we became regulars, too. Now I tell a new DP I'm comfortable with Clairmont and he generally nods his head."

"Here's how comfortable: the Clairmonts have sent us prepped cameras for over 200 jobs and we've shot with them both in Phoenix and at locations in six States," says Mr. Linsman. "One day in Phoenix, I remember, somebody powered up the camera wrongly and shorted it out. This was at the start of the day – about 8AM. A phone call to Clairmont and we had a prepped replacement camera body on our set before 10.30."

In the U.S.A., Bill Linsman has directed (and in many cases produced) TV commercials for McDonalds, Chevron, General Mills, Oldsmobile, Pepsi, Porsche, Coors, Coca Cola, Honda and American Express, among others. In London: spots for Crest, Pampers, Clearasil, Head & Shoulders and Vicks, among others.

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ASC Salutes Sven Nykvist

Sweden's master cinematographer receives 1996 Lifetime Achievement Award from American Society of Cinematographers.

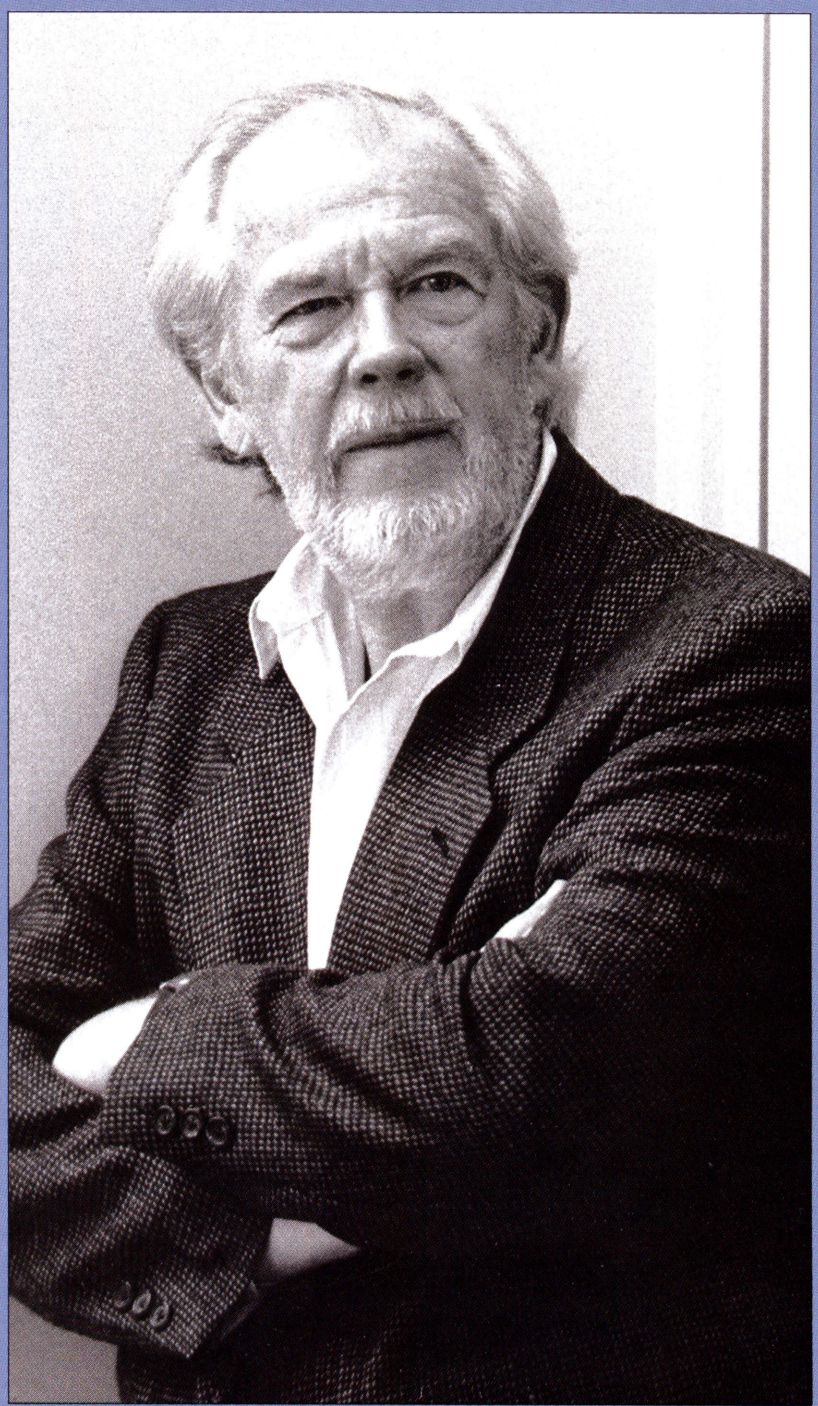
by Bob Fisher

ADDING YET ANOTHER GARLAND TO his distinguished career behind the camera, Sven Nykvist, ASC will receive the 1996 Lifetime Achievement Award from the American Society of Cinematographers. The prize will be presented to Nykvist at the Society's annual awards banquet, to be held at the Century Plaza Hotel in Los Angeles on February 25.

Previous recipients of the accolade are ASC members Gordon Willis, Conrad Hall, Haskell Wexler, Phil Lathrop, Stanley Cortez, Charles Lang, Jr., Joe Biroc and George Folsey. Nykvist is the first non-American to earn the coveted honor.

"Sven is a talented filmmaker who has made unique and enduring contributions to the advancement of the art of cinematography," says ASC President Victor J. Kemper. "He has created an extraordinary body of memorable work that grows larger and more impressive every year. This award is meant to recognize and encourage artistic excellence and to foster an appreciation of the art of cinematography wherever movies are produced and seen."

In a typically modest and understated response, Nykvist says he was "surprised but happy" when Kemper phoned him with the news. Nykvist has earned Academy Awards for his work on *Cries and Whispers* (1973) and *Fanny and Alexander* (1983), as well as a third Oscar nomination for *The Unbearable Lightness of Being* (1988). His body of work includes about 120 films, but he shows no signs of slowing down. Nykvist was preparing to shoot a film in Scandinavia when Kemper called, and in August will shoot a film based on a new



Ingmar Bergman script.

Nykvist's name is routinely coupled with Bergman's; their brilliant collaboration stretched over much of three decades, producing such classic films as *Sawdust and Tinsel* (1953), *The Virgin Spring* (1959), *Through a Glass Darkly* (1961), *Winter Light* (1962), *Persona* (1966), *The Hour of the Wolf* (1968), *The Passion of Anna* (1970), *Cries and Whispers* (1972), *The Magic Flute* (1973), *Scenes From a Marriage* (1973), *Face to Face* (1976), *Autumn Sonata* (1978), *The Serpent's Egg* (1978) and *Fanny and Alexander* (1983).

But his duets with Bergman comprise just a small part of his life's work. Nykvist has compiled credits with many other accomplished directors, including Roman Polanski (*The Tenant*), Louis Malle (*Pretty Baby*), Paul Mazursky (*Willie & Phil*), Bob Fosse (*Star 80*), Alan Pakula (*Dream Lover*), Norman Jewison (*Agnes of God*), Philip Kaufman (*The Unbearable Lightness of Being*), Lasse Hallstrom (*What's Eating Gilbert Grape?* and *Something to Talk About*), Woody Allen (*Another Woman, Crimes and Misdemeanors*), Nora Ephron (*Sleepless in Seattle*) and fellow Bergman veteran Liv Ullmann (*Kristin Lavransdatter*). His other credits include *One Day in the Life of Ivan Denisovich, Cannery Row* and *With Honors*. In 1991, Nykvist directed *The Ox*, which earned critical praise.

Nykvist's career spans half of the history of cinema; 1995 marked his 50th anniversary as a cinematographer. He shot his first narrative film, *13 Chairs*, in Stockholm, Sweden in 1945, when he was 23. His subsequent body of work has played a major role in redefining the art of contemporary cinematography.

"I was fortunate to work with Ingmar, particularly at that early stage of my career," he says. "One of the things we believed was that a picture shouldn't look lit. Whenever possible, I lit with one source and avoided creating double shadows, because that pointed to the photography."

Such principles are common among modern cinematographers, but Nykvist came to these conclusions some 30 to 35 years ago, when he was blazing trails that many other cameramen would subsequently follow. He says his visual inspirations came from Bergman, and also from studying paintings at fine art galleries and museums.

"A motion picture doesn't have to look absolutely realistic," he says. "It can be beautiful and realistic at the same time. I am not interested in beautiful photography. I am interested in telling stories about human beings, how they act and why they act that way."

Nykvist was born in Stockholm in 1922, the son of missionary parents who built a hospital in the Belgian Congo. A cinema buff as a youth, he later studied at the Stockholm Municipal School for Photographers. In 1941, Nykvist went to work as an assistant cameraman at Sandrews Studios in Stockholm. In those days, Swedish crews consisted of just two people — the cinematographer and the focus puller, who was also responsible for still pictures.

During the mid-1940s, Nykvist spent some time working in Italy as a focus puller, a stint that helped broaden his world view and artistic outlook. After returning to Sweden, Nykvist began shooting film for second-unit crews. He also photographed, directed, wrote, edited and recorded sound for many documentary films. In 1952, Nykvist was the co-director, co-writer and co-cinematographer of *Under the Southern Cross*, a narrative film produced in the Belgian Congo and based on an experience his parents had had with a witch doctor. At about the same time, Nykvist shot a documentary about Dr. Albert Schweitzer's work in Africa.

In 1953, Nykvist got his first chance to work with Bergman, as director of photography on the feature *Sawdust and Tinsel* (a.k.a. *The Naked Night*). Another cinematographer, Göran Strindberg, had been scheduled to shoot the film, but Strindberg decided instead to go to Hollywood to film a Cinemascope movie with a much bigger budget.

Nykvist recalls that during those days, Bergman was making films for $100,000 with a crew of eight to 10 people and four or five actors. "That was a very nice way to work," he says. "Everyone did everything. Everyone helped everyone else. It was like a family. Even *Cries and Whispers* was produced on a $300,000 to $400,000 budget. I learned so much about composition, staging and the infinite varieties of light from Ingmar."

Nykvist and Bergman nurtured a natural style of visual story-telling reminiscent of silent movies, and during the beginning of their relationship, the cinematographer focused on a seminal idea. "I learned that there are types of lighting you can use to create an ambience," he says. "There's a single sentence in *The Magic Lantern* [Bergman's self-penned biography] which expresses that concept: 'Light: the gentle, bare, dreamlike, living, dead, clear, misty, hot, violent, sudden, dark, spring-like, falling, straight, slanting, sensual, subdued, limited, poisonous, calming pale light. Light.' There are so many ways you can use light to tell a story. I think anyone who wants to understand light should read Ingmar's book."

> " I am not interested in beautiful photography. I am interested in telling stories about human beings, how they act and why they act that way."

Asked to verbally dissect Bergman's eloquent statement about the variable nature of light in layman's terms, Nykvist responds, "Gentle light is what you might use if you're photographing a woman, and you want her to look very beautiful and soft. Dreamlike light is also very soft. I achieve this with light rather than low-contrast filters, but that's just my preference. Living light has more contrast and vitality, while dead light is very flat with no shadows. Clear light is more contrasty, but not too much."

He continues, "Misty light could involve the use of smoke or fog filters. Violent light is more contrasty than living. It is a subtle

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distinction that influences how the audience perceives and reacts to the images on the screen. Spring-like light is a little warmer, and falling light is when the angle is very low and you get elongated shadows. Sensual light is for love scenes; it's difficult to put it into words, because film is a visual language. That's the role I play as a cinematographer — understanding the script and the director's intentions, and translating them into images that express the ideas."

"That's the role I play as a cinematographer — understanding the script and the director's intentions, and translating them into images that express the ideas."

Nykvist says that he generally knew what Bergman had in mind without having to parse scripts page by page. He maintains that unless the director of photography understands the artistic intentions of the director, there is no way he or she can perform the duties at hand.

"Every picture defines its own look, and that definition begins with the director's intentions for the script," he says. "Some directors have their own ideas about staging, lighting and composition. Others are mainly interested in the actors. You must be able to form a relationship with both types of directors, and also establish a feeling of trust between the cast and crew. I always tell the actors what I'm doing and why I'm doing it."

In conversation, Nykvist emphasizes simplicity and aesthetic values over imaging technology, but he is a meticulous master of the craft as well as the art. When the cinematographer was preparing to shoot *The Unbearable Lightness of Being* with director Philip Kaufman, the duo studied black-and-white documentary footage to determine what it had looked and felt like when the Russian army poured into Prague and crushed a civilian revolt. Nykvist replicated that chaotic atmosphere by shooting those scenes in 16mm black-and-white, which added a touch of grain. Next, he made a duplicate negative which closely matched the contrast of the actual documentary film. Woven into the fabric of the dramatic story, the footage gave the audience an emotional sense of place and time.

Every film shot by Nykvist offers subtleties that the audience feels rather than sees. In *Unbearable Lightness,* he used the architecture of the buildings in Prague as more than just background; they were like silent characters, standing in dignified despair as the city was violated.

Inevitably, though, this cinematographer's work is about faces and eyes, whether he is shooting a serious drama or more lighthearted fare. The faces of beautiful women, especially Liv Ullmann, were a central motif of many Bergman films. "Truth always lies in the character's eyes," Nykvist says. "It is very important to light so that the audience can see what's behind each character's eyes." The cinematographer notes that it takes time to really learn a face and interpret what is happening within. "That's a problem [in cinema] today," he says. "You are always working with new actors. You can't always tell immediately how their faces will take light. The truth of the characters is in the eyes; that's how the audience gets to know them as human beings. It opens up their souls. When I was working with Ingmar and Liv Ullmann, there were a few other actors who were always in his films. I can see it looking back on those movies now. I knew everything about photographing them. I learned to know their faces."

Nykvist also stresses the importance of consistency. His preference during staging is to plan for very long, six- to eight-minute takes that won't break up the actors' performances. "Good actors will react to the lighting," he says. "When you do complex staging, you have to remember that you aren't lighting for exposure. You

are creating an ambience, and you have to figure out how you are going to get light into the actor's eyes or, when appropriate, mask them. I have no preference for hard or soft light or any other style or technique. You should use the light that's right."

He developed this mode of thinking while dealing with the challenges imposed by black-and-white photography, then applied his philosophies — most effectively — to his later color work. However, he points out that there is never one path that is suitable for everyone in all situations. He says that he tends not to concern himself with such niceties as the symbolic use of color, although there are certainly sterling examples of this strategy on his resumé (e.g., the use of red in *Cries and Whispers*). "I worry less about being symbolic than some other cinematographers," he says. "Everyone has their own way of thinking. My tendency is to use bounce or indirect light. Harsher light can distort the story that's written on the actor's face."

Nykvist also has a tendency to use smaller lighting units whenever possible. "It feels cleaner," he says. "Smaller units give you more control. You can create more precise moods and atmosphere. This is something I learned gradually. When I shot my first feature in 1945, we used lots of lights. Sometimes I spent a whole day lighting. I wanted to shoot a beautiful picture, but every scene looked the same. Now, when I see some of my old pictures on television, I can see everything I did wrong."

Advances in imaging technology, he concedes, do provide some creative latitude, but a basic approach can often prove its value. "If you are shooting a night interior scene, there might be a lot of sources," he says. "But if you are shooting a daylight exterior, there is only one source: the sun. The question is usually how much I should fill, so it doesn't get too dark in the shadows."

Despite his 50 years as a filmmaker, Nykvist insists that every new project is a learning experience. He says that he learns from the directors, actors and crew he works with, but notes that the pro-

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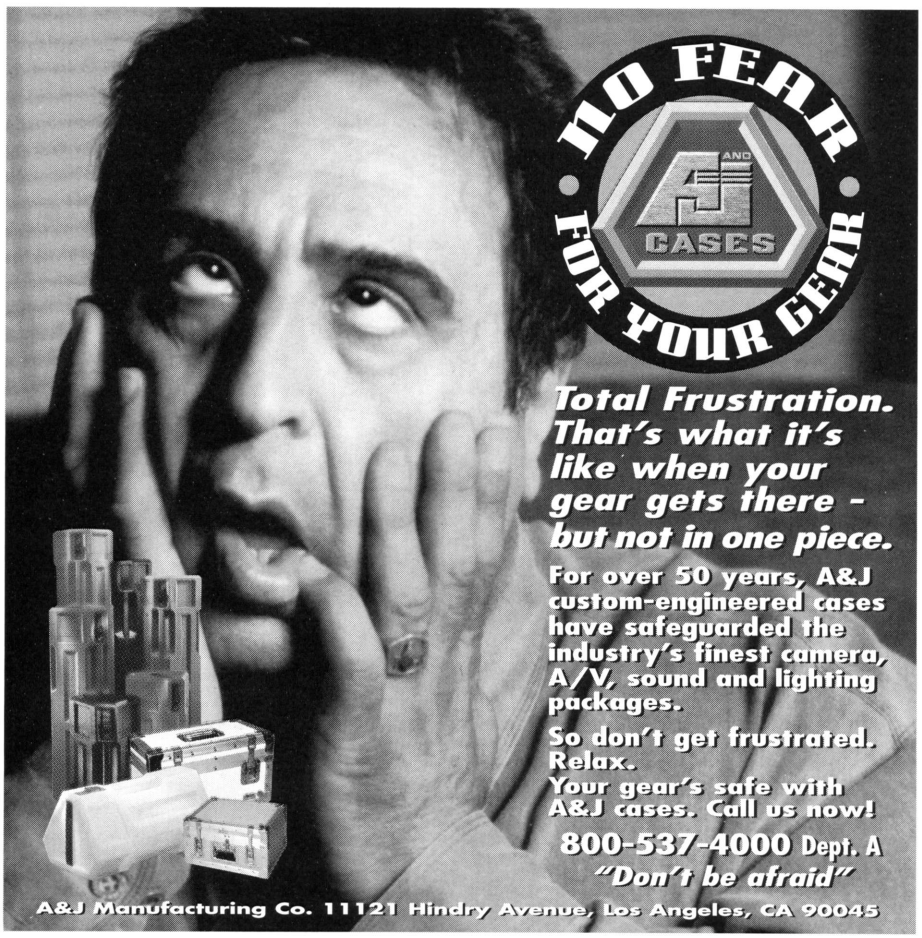
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cess is a two-way street. "If I am open to hearing and discussing their ideas, they are more likely to listen to me," he says. "That's human nature."

With all of the international boundaries that Nykvist has crossed in making movies, he has never experienced unsolvable language problems or other communications barriers. His approach to previsualizing is traditional. He reads the script, thinks about it, and develops some ideas. "I like to watch rehearsals without the camera," he says. "I watch what happens. Sometimes actors feel that they have to move when they say a particular line. You discuss this with the director, and ask if he or she wants us to follow the move or track in the opposite direction. There are so many ways you can cover the same move — with tracks, or a crane — and all of them affect the pace of the action. There are always choices regarding light, movement and focal length. Those decisions come from inside."

Once the strategy has been decided, he looks through the lens and places his lights. "I put up one light and see if it feels right," he says. "Sometimes you have to say to yourself, 'I made a mistake,' and try something else. There are so many different people involved in making a movie: the producer, director, art director and, of course, the cast. When you take too long to light, you can feel their eyes in your back. Everything is different every day, even your own moods. Some days everything is right. Other days everything is impossible."

Nykvist tries to reduce his approach on each picture to a few basic principals, trusting his eye and his instincts. This, he submits, is what makes cinematography such a rewarding profession. "It's an unusual occupation," he relates. "It's both an art and a craft. Every time I start a picture, on the first day it seems as if I am starting all over again. I love it. You can always learn something new. Sometimes it is about manipulating light. Other times it is about finding another angle into the human soul. That's what keeps this work so interesting. Until I find something I like better, I'll probably do this work forever."

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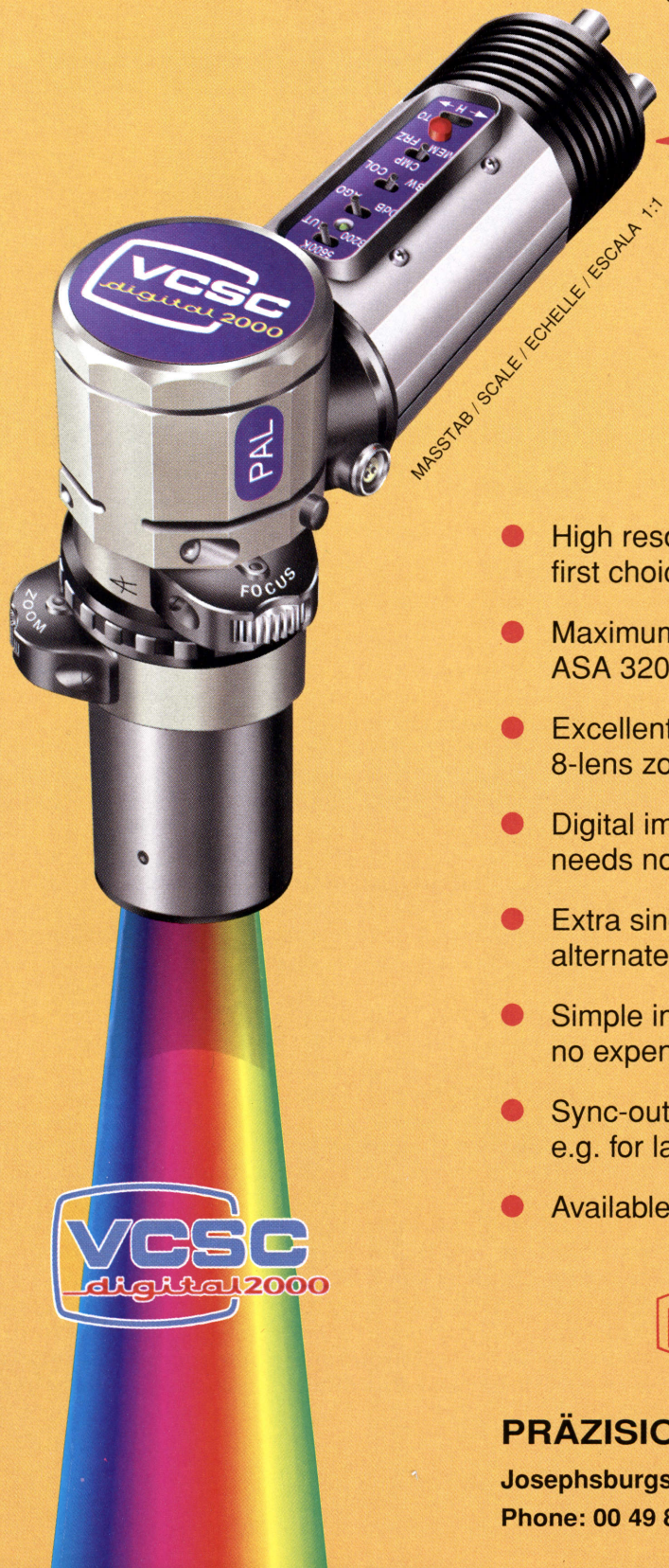

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Minting a Screen Version of *American Buffalo*

The filmmakers behind *Federal Hill* return in high style with a cinematic adaptation of David Mamet's playhouse tale of a rare coin that spurs small-time revenge.

by Bob Fisher

IT TOOK SEVEN YEARS FOR WRITER-director Michael Corrente and cinematographer Richard Crudo to get a producer interested in their first film collaboration, *Federal Hill*. Corrente, who earned his credentials off-Broadway, adapted the film from a play he had written. Crudo, a film school graduate, had worked mainly as an assistant cameraman since 1978.

The duo finally collected enough support to produce the film themselves (see *AC* May 1995) and made a creative decision to shoot it in black-and-white. When Trimark Pictures agreed to distribute the film, it was like a dream come true. Following a limited release, the filmmakers were rewarded with flattering reviews. But even the best dreams can turn into nightmares. After Corrente agreed to colorize the home video version, Trimark sought to colorize the theatrical release.

Crudo and Corrente were stunned. Fortunately, the Artists' Rights Foundation championed their cause, resulting in a media furor and a compromise. Crudo agreed to supervise the colorizing of his own work for home video, and Trimark dropped its scheme to alter the big-screen version.

However, their ordeal resulted in a happy epilogue. While attending the Hamptons Film Festival, playwright David Mamet was impressed by the black-and-white version of *Federal Hill*. What happened next can be attributed to either serendipity or luck. As he made the rounds at the festival, Corrente met both Mamet and Gregory Mosher, who had produced and directed Mamet's play *American Buffalo* at Lincoln Center. Fortuitously, Corrente had both directed and appeared in the play at other repertory theaters. Mamet asked Corrente what he was working on next. "I'd like to do *American Buffalo* on film," Corrente replied without hesitation.

About six months later, Corrente and Crudo were in Pawtucket, Rhode Island, translating *American Buffalo* to film from Mamet's script. The screen version stars Dustin Hoffman and Dennis Franz, along with Sean Nelson, who first appeared in the critically-acclaimed *Fresh*. The project attracted a reputable distributor, the Samuel Goldwyn Company, and will soon be seen on screens across the U.S.

All of this may sound like a press agent's fabrication, but it actually happened. Corrente and Crudo made the most of the opportunity. "This project came together very quickly," Crudo says. "Michael loves *American Buffalo*. I think it's his favorite piece of contemporary literature, so he knew exactly what he wanted to do."

The cinematographer admits that he has never seen the play on stage, and he still hasn't met Mamet, though the author spoke with Corrente and the producers regularly. "Michael knew the dialogue backwards and forwards, and understood it through the eyes of an actor as well as the director," he says. "He gave me a lot of time to discuss ideas, so I was able to latch onto what he was thinking.

"I like our relationship. We can say what's on our minds very plainly. We don't need to sugarcoat it; we can just be blunt. Basically, Michael tells me what he wants, and he gives me the freedom to interpret it in a do-able way. That's the synergy we've developed, and it seems to work."

For the Brooklyn-born Crudo, shooting such a prestigious project was the culmination of a 17-year odyssey. When he was 14, his father took him to see *The Godfather* in an opulent palace theater, an experience that began his love affair with movies.

Photos by Myles Aronowitz and Brian Hamill, courtesy of the Samuel Goldwyn Company.

In his later teens, Crudo realized that movies didn't happen through magic, and that people actually worked to create them. Encouraged by a teacher at St. Johns University who had worked as a documentary writer and director, Crudo decided to pursue a career in film. After graduation, however, he discovered that he didn't have enough experience to qualify for membership in the New York camera Guild.

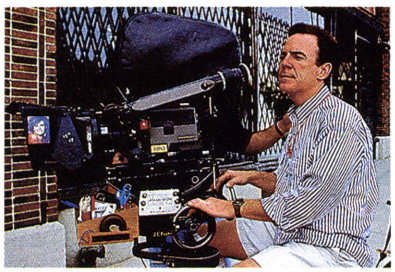
Undaunted, Crudo began working as an assistant cameraman and in various other roles on fringe films made on minuscule budgets. He filled the gaps between projects by taking classes at Columbia University, where he eventually earned a graduate degree in filmmaking. By the 1980s, he was in the Guild working regularly as an assistant cameraman. His credits in that capacity include

Opposite: ***Dustin Hoffman reprises his Ratso Rizzo past as a junk shop denizen. Crudo (this page, bottom) found the actor's enthusiasm inspiring, remarking that he and costar Dennis Franz "just said, 'Tell me what you want me to do and I'll do it.'"*** **Left:** ***Donny (Franz) tends to a roughed-up Bobby (Sean Nelson) as Teach (Hoffman) observes. "It was a remarkable experience to work with actors of that caliber," says the cameraman, who regularly used rim lights to delineate the actors from their dark or cluttered backgrounds.***

Ghostbusters 2, *The Purple Rose of Cairo*, *The Money Pit*, *The Flamingo Kid* and *Ishtar*.

Asked if he had any regrets about all of those years spent working in the trenches, Crudo submits, "Sure, there have been times when I've been impatient, but I've worked on crews with Gordon Willis [ASC], Michael Chapman [ASC], Vittorio Storaro [AIC, ASC], Laszlo Kovacs [ASC], and other great cinematographers. It's like studying to be a brain surgeon. You want to intern with the best. Coming up through the crew system, and watching the masters solve problems, gives you a level of knowledge and understanding that you can't get any other way. You may never use the same technical solutions to problems, but you can extrapolate."

Like many of Mamet's plays, the story of *American Buffalo* centers on ordinary Joes who get caught up in extraordinary events. Donny (Franz) has spent years operating a junk shop and hanging around with his friend Teach (Hoffman). "They have a daily routine," says Crudo. "Donny opens the junk shop in the morning. He carries sale items outside and lines



them up on the curb. He reads the newspaper, drinks coffee and waits for Teach. They talk. This is their lifestyle."

One day, a customer poking through the junk finds a rare buffalo nickel, which Donny sells to him for $100. However, the cronies soon convince themselves the man must be a coin collector who has cheated Donny. They plot to avenge the injustice by stealing the man's collection with the help of Bobby (Nelson), a local teenager.

The question is, are the characters actually planning a robbery, or simply passing the time of day? Crudo says that's for the audience to decide. His impression is that as the film progresses, what begins as a crazy scheme starts to become a real possibility. Crudo observes that Donny seems to be much smarter than Teach, but has reached a point in his life where he's drawing a line in the sand and refusing to let anyone cross it.

Crudo notes that one key to translating *American Buffalo* from a stage play into film was the five weeks of preproduction planning he had on location. He spent four weeks watching rehearsals, observing the mannerisms and interactions of the actors. He also conferred regularly with Corrente and production designer Danny Talper.

He spent the fifth week getting ready to shoot. During this period, Crudo shot a series of film tests with the help of the DuArt Lab in New York. Corrente wanted a very sharp, clean and unfiltered look. Crudo tested both the Eastman EXR 5298 500-speed film and the 200-speed EXR 5293 film. He decided to shoot the entire movie with the 5293 film after seeing the clean and rich look it yielded.

"I was going to test a bleach process for making prints," he says, "but I didn't bother after seeing how clean and grainless test prints made from the 5293 looked. The grain was tight, and the images were crisp. We wanted a pure, clean look that wouldn't call atten-

The entire Buffalo shoot was completed in a double-storefront set built in Pawtucket, Rhode Island, as well as a basement and surrounding streets. Here, a large softbox is used to put a sheen on the wares from Donny's shop.

tion to the photography."

The choice of stock wasn't a casual decision. Crudo knew that he would be shooting in low-key, shadowy environments. By opting for the 200-speed film over the 5298, he was giving up about 1.5 camera stops, which meant that he would have to pump more light into each scene. Crudo overexposed the film by rating it for an exposure index of 160 in tungsten light, which yielded a richer negative. The only filter on the camera lens was a Kodak Wratten number 85 to correct the color balance on a few daylight exteriors.

After testing, Crudo selected one printer light for everything. "I have to thank DuArt," he says. "They were totally consistent, day after day. There's not one bad frame in the movie. That's a blessing for any cinematographer. It gives you a lot of peace of mind, and enables you to concentrate on making the film."

Principal photography was completed in 26 long days, shooting almost entirely on one drab set. "It got claustrophobic," Crudo says. "Everyone was on top of everybody else. We were in Rhode Island during the hottest part of the summer. It was incredibly hot and humid every single day, and we were on a small set with 10Ks and 5Ks. The place heated up like an oven. We had air conditioning pumped in between takes, but most of the time it was unbearably hot. In those circumstances, you just try to back off and be more considerate."

Crudo shot the entire picture with the key light reading at T2.8, which provided enough depth to pull details from the deep background. He shot about half of the film with a Primo 40mm lens on a Panaflex camera. About 20 percent of the time, he used a 75mm lens. The remaining scenes were filmed with a mix of wider and tighter lenses. "I had a terrific set of Primo lenses from Panavision New York," he says. "They were perfectly color-matched, and all of them were as sharp as a tack."

Crudo says that the film's visual grammar, while understated, is what makes the screen version a different experience than the theatrical one. "If you are watching a play, you see it from one perspective, and you have the entire proscenium in front of you," he points out. "You decide where to look. With film, we can guide the viewer's eye with editing, lighting, focus, composition, and the other normal tools. We can show them Donny's reaction to what Teach is saying, and create environments that establish a sense of time, place and mood."

Crudo was sparing in his use of tight close-ups. "We saved them for a 'Sunday punch.' I think it was Allen Daviau [ASC,] who said that in an article I read in *American Cinematographer*. When we did come in tight for emotional impact, close-ups were a lot more effective. Television is a close-up medium, but you have to be more selective on the big screen."

When shooting close-ups, Crudo would usually raise the level of fill, according to the angle of the light and how the shot played in wider angles. It sometimes was sufficient to simply move the key a bit, and just get a little more light in the actors' eyes. At other times, Crudo notes, scenes played better if he made use of "the *Godfather* effect," shielding the performers' eyes with shadows. Most of the time, tight close-ups called only for little cosmetic touch-ups, slightly better definition and more interesting texture.

Texture, he says, also gave the set its resonant ambience. "Every detail is there in crisp reality. It makes the movie look as if it cost a lot more than it did. Ultimately, this was a very low-budget movie. It cost a couple of million dollars to get it into the can. We really tried to give it the biggest bang for the buck. That's the obligation of a cinematographer."

There was some talk about shooting *American Buffalo* in anamorphic black-and-white, and Hoffman even offered to make that condition part of his contract negotiations. But the distributor convinced everyone that there was too much at stake. It was a moot point, anyway, because Crudo discovered that no anamorphic format lenses were available when *American Buffalo* started production in Pawtucket last June.

"I still think it would have been a great black-and-white film," says Crudo. "The story has a contemporary theme, but it's also almost a throwback to a different era. It feels like a different time and place. I think black-and-white would have been a nice distancing device, and it would have enabled us to put a different edge on the film."

Most of the story was filmed on a set constructed in a

double-sized storefront. The company gutted the interior and rebuilt the set from the ground up. Another set in the basement was used for a few scenes that aren't in the stage play. Other scenes were shot on the street in front of the store, in an alley behind it, and in a building on the same street. "We never strayed more than 100 yards from the set," says Crudo.

Corrente wanted a subdued setting, so many of the scenes were designed with darkish greens and browns as the dominant colors. The overall look was worn and weathered. "I wanted it to feel as if there was a coat of dust an inch thick on everything," says Crudo. "My point of visual reference was *The Pawnbroker*. It's not quite that same design, but there is that same feeling of claustrophobia. Donny and Teach are trapped by their environment, and Bobby is waiting in the wings. It's a story about desperation as much as anything, though there is a lot of humor in the film."

The film's costumes were also subdued. Hoffman wears a dark brown corduroy jacket for most of the movie, and Franz is clad in a dark greenish shirt. The basic colors are brown, dark grays and greens, and since the story happens during one day, there aren't many costume changes. The problem for Crudo was that he was shooting on a comparatively dark set, sometimes at night, with dark backgrounds and characters dressed in dark clothes.

"We had to be careful about separating the characters from the background," he says. "It was almost like shooting black-and-white film. We had to be aware of how different colors blended with the dark backgrounds, especially since we were working with a low level of key light. The remedy was simple: we put a little rim light on the character, or we used a back light that gave them a bit of a glow. It was never a problem."

There were no wild walls on the set, which was about 40' wide and 50' deep, with an 18' ceiling. Crudo had ample space for concealing lamps.

"Darkness plays a part in establishing the mood, and also in keeping variety in the visuals," he says. "Instead of planning jazzy camera moves, we used light and darkness, not only to signal changes in times of day, but also in the mood. The lighting is very carefully modulated with the movements of people. They are usually moving through different gradations of light, even if they walk only five or six feet. Nobody moves through long stretches of flat-lit territory. There are no unmotivated lights hitting someone in the head. We begin the movie at dawn with Donny and Bobby walking and talking on the street. Donny opens the shop in darkness, and Teach helps him pull up shades and turn on lights."

As the day advances toward night, source light is orchestrated like an elegant ballet, becoming more and more moody. This approach is synced to the planning of the robbery, creating a gradual buildup of suspense. Crudo also altered the mood of his lighting to highlight the film's subtext, as Teach tries to turn Donny against Bobby.

Light streams through the junk shop's big plate glass windows during daylight hours, but the size of the set meant that walls and other background settings were a bit darker. The window light penetrated about 10 feet deep before it dissipated, and Crudo was true to that reality while lighting the film.

"There are a couple of windows in the back, but they are totally inconsequential," says Crudo. "Most of the light comes from visible sources. There are practical lamps all over the place. Some are hanging overhead, some are on the floor level. There's a lamp on Donny's desk. A lot of action takes place around this desk, because that's where Donny spends most of his time. That light is kind of neutral. It's not warm or cold, but it's modulated so that no one is flat-lit. Everyone has some sort of fall-off on one side or the other, and it's generally motivated by a visible source that's seen or implied in the shot."

For example, Crudo simulated a skylight effect on two parts of the set with the help of two 9-lights hung on the overhead grid.

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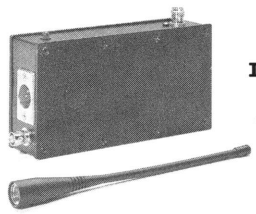

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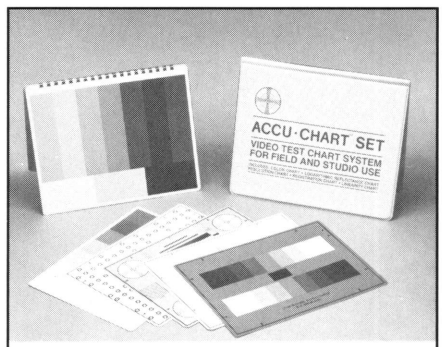

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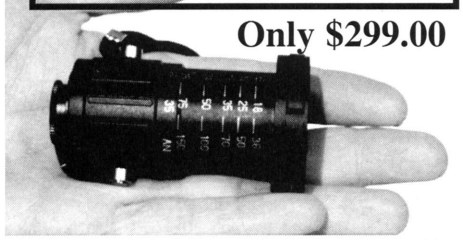

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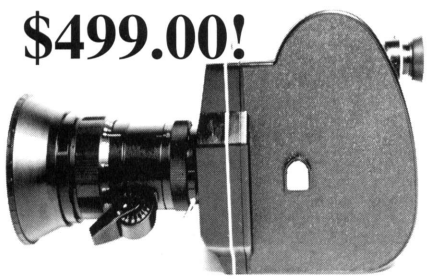

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These fixtures created two "kind of hot," overexposed areas in the shop, and provided a credible way to break up the visual monotony of the dark walls. Concealing the grid was never a problem, he explains, because the ceiling was so high. Even when Crudo was shooting from a very low angle, the images of the ceiling tended to recede into darkness.

"I decided before we started shooting that there was always going to be some fall-off between the key and the fill side — a little bit of shadow," he says. "That provided a bit of texture and accented the mood. We dropped from a stop and a half to two stops on the fill side. Occasionally an actor missed his mark and would move out of the light. Sometimes it could be six or eight feet because the performers were so wrapped up in what they were doing. I remember how surprised I was the first time that happened. I thought it was a bad take. But I printed it anyway to look at the dailies, and it played well in the shadows.

"In part, that's because this movie is more about darkness than light," he adds. "It's woven into the characters. That theme evolves through the story according to the way the characters are behaving at any given moment. There is an evolution of the lighting scheme that I hope no one but me notices. It happens in concert with the subtext. Sometimes it plays in sync with the writing, where the situation is getting darker. At other times, we play the quality of light against that typecasting."

Crudo maintains that this objective was simply intended to help tell the story. "It's more interesting to look at faces that have some texture," he says.

Basically, Corrente and Crudo wanted to put the audience in the junk shop as invisible participants with Donny, Teach and Bobby. "If you met these characters in the real world, they would probably be fascinating," the cameraman says. "They aren't dangerous or threatening, though they definitely have a darker side, and maybe that's what makes them so interesting. It's an opportunity to get close to some idiosyncratic characters and see how they act and speak with one another. I really think that's the crux. They are neither repulsive nor sympathetic characters. The film is never judgmental or manipulative in that way. It's a slice of low-brow life, if that makes sense."

Crudo says that in addition to his close collaborations with Corrente and production designer Danny Talpers, he also had ongoing discussions with the film's editor, Kate Sanford, who was working in a room on the second story of the building containing the junk shop set. The exposed negative was shipped regularly to DuArt, and the next day Sanford was editing the workprint. This unique situation had its advantages; occasionally, Sanford would stroll downstairs and say something like, "Gee, I could use a close-up of Dustin for a transition."

The filmmakers screened dailies every night at a storefront about a block and a half from the set. They painted the interior walls a flat black to create a controlled projection environment.

Corrente also sought to infuse the film with a sense of motion, to make viewers feel as if they were moving through the shop. Sometimes, the camera pans with the action, or in the opposing direction. At other times, it followed in the characters' footsteps.

The director wanted Crudo to capture the emotional content of the performances and dialogue in a visually interesting way without getting in the way of the actors or drawing attention to the camera. Because he was shooting in such a confined space, Crudo knew that he couldn't use a crane, Steadicam or other devices for moving shots. "We were always either on tracks or a dance floor," says Crudo. "The grips laid down ¾-inch plywood sheets. That gave us the freedom to be off the tracks. It enabled us to move at odd angles, or switch angles while we were inside a move and do other things you can't do on the track. But, there are no intricate camera moves just for the sake of movement. The camera is never self-conscious. It moves when it's supposed to move, and it's static when it's supposed to be static."

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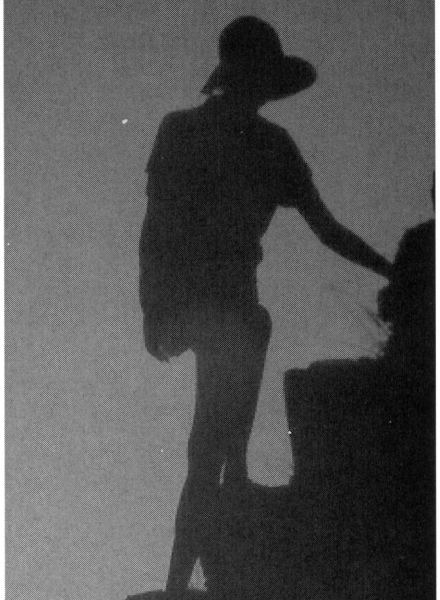

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The operator on the shoot was Dan Turrett, and the assistant cameraman was Tom O'Halloran. Having come up through the ranks of the crew system, Crudo is sensitive to the contributions key crew members can make. He points out that the abundant improvisation made *American Buffalo* a tough assignment for both Turrett and O'Halloran. "It seemed as if Dustin never did the same thing twice," Crudo says, "so we were often working by the seats of our pants. Still, I don't think there's a single soft frame in the move."

The cinematographer also reserved praise for gaffer Michael Burke and key grip John Mazzoni. "Michael did a fabulous job. He has a good sense of humor and a perfect temperament for a difficult job like this. John is another guy I've worked with since my years as an assistant on the East Coast. He did a terrific job under extremely trying circumstances."

Crudo says that he and his crew cultivated a "noirish quality" for the film's visuals. Given the set's 2,000 square feet, it would have been relatively simple to fill the set with light and let the actors roam freely. "There are long scenes with a lot of dialogue that begin with a long, wide master shot and end with an actor coming within six to eight feet of the lens," he adds. "They move through pools of light and shadows. The levels of light are carefully modulated. It required a lot of grip work, and cutting, netting and flagging, but I think all of the effort paid off."

The very wide shots were lit mainly from the floor, because it would be too awkward and time-consuming to have crew manipulating the lights in the grids. Many of the bigger props, such as display cases and even couches, were built on wheels so they could easily be rolled out of the way to make room for lamps.

"That was one of the things we worked out in prep with Danny [Talpers,]" he says. "I knew our guys would have to get in and out of tight spaces. For interiors, day and night, the prime units were two 10K tungsten lamps, a couple of 5Ks and lots of 2Ks. We had to punch a fair amount of light in there. I also used a lot of 4K Zips, and softlights with egg crates were used quite a bit as fill. We also used a lot of 216 diffusion on the 10Ks and the 5Ks to soften them up a little bit and take the edge off."

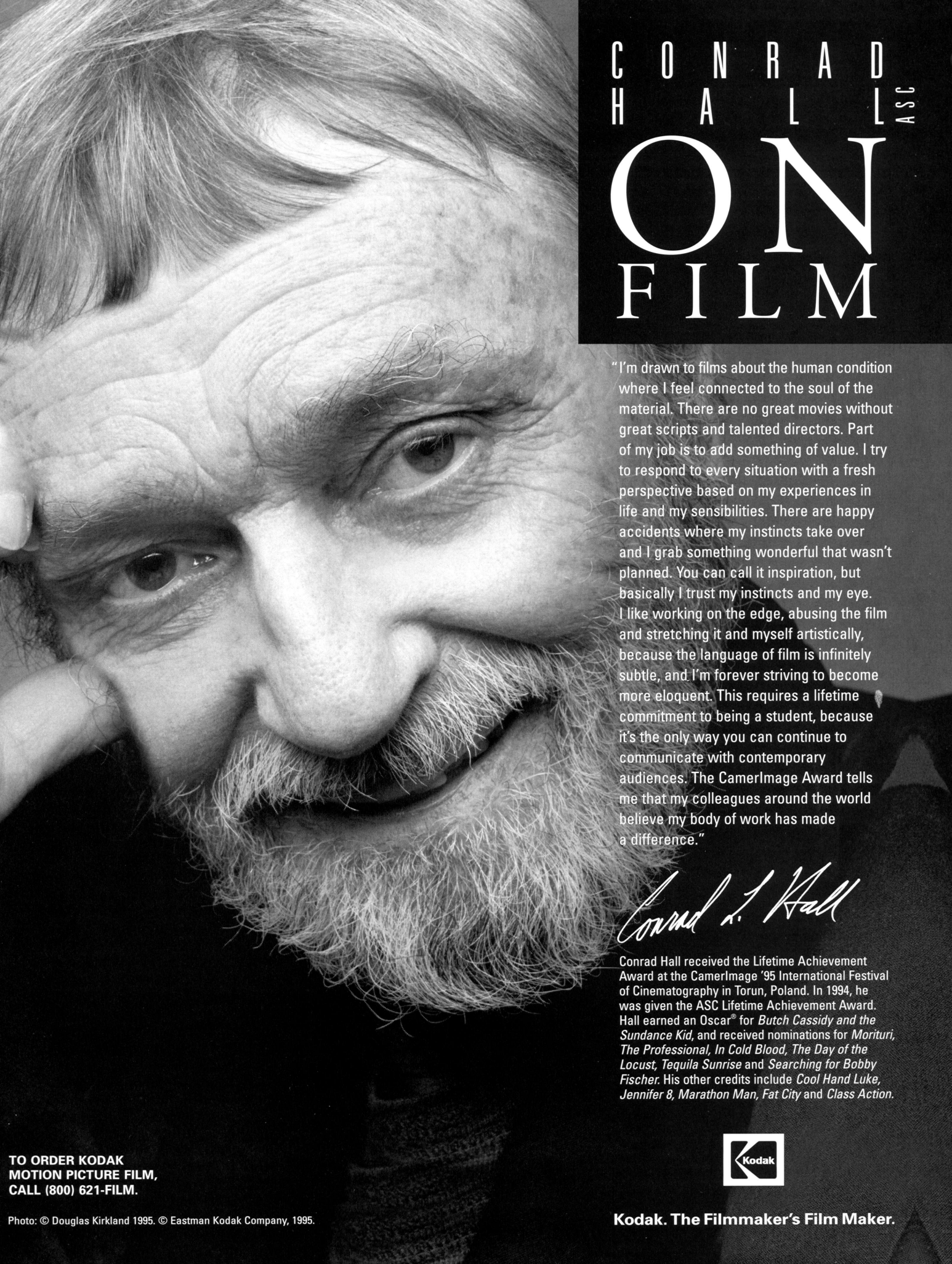
Seeking consistency, Crudo was very precise about reading the color temperature, making sure his lights were very close to 3200° Kelvin. He recalls that probably half the lamps needed anywhere from an eighth to a quarter CT Blue to balance them and get them up to speed. Almost all of the tungsten lamps ran a little bit on the warm side.

"It took some work up front," he says, "but it gave us very consistent flesh tones, and the set itself looked exactly the way it was supposed to every day. Dustin came to dailies every day, and he always had some comments. We also used video assist, initially because Dustin wanted it. At first Michael resisted, but eventually he loved it. He would watch both the staging and performances. Dustin likes to do a couple of takes, and then take a look at himself on the video monitor. We had a color video tap from Panavision. It's a very high-resolution image, and that helped."

On the down side, Crudo labels the video tap "a momentum killer." But, he adds, "There was no use fighting it, so I tried to take advantage of it as best I could. I did find it useful for staging."

After all is said and done, of course, the big question is how the material will play with the audience. Crudo believes that he witnessed a good omen during filming of the last scene, on the next to the last night of production. As the crew finished shooting the sequence, a dialogue between Donny and Bobby, Crudo glanced around the set and saw everyone crying. "It was very touching," he says.

The cinematographer concludes, "Critics and scholars have said that the play is a social commentary on the capitalist system, brought down to a very tiny and intense level. You could read it that way, but I think it's more about human dynamics. This story is not really about a coin and a robbery, or even about a guy who runs a junk shop. I think it's about family and friendship."



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Mighty Aphrodite Tours Manhattan

Director Woody Allen and cinematographer Carlo Di Palma, AIC renew their longtime collaboration, once again taking advantage of New York City's unique location flavor.

by Eric Rudolph

VETERAN CINEMATOGRAPHER CARLO Di Palma, AIC has photographed 10 Woody Allen features in the past 10 years. And true to his roots in the Italian neo-realist cinematic *verismo* tradition, most of these films were shot on location in New York City, including the recent *Mighty Aphrodite* and another forthcoming feature.

"*Mighty Aphrodite* was shot entirely on location; nothing was shot in a studio," says Di Palma. "Woody and I prefer to work on location instead of in a studio, the way I did in the early days in Italy. We like the studio situation, where you can build whatever you want, but I like to use the real light and to take control of that light. If I look up on a set and I don't see a ceiling, the emotion for me is all wrong. When I look up at the ceiling and see a row of 10Ks it is very distracting to my creativity."

The director of photography was born in Rome, and his older brother was a gaffer at the nearby Saffa Politino film studio. Di Palma's father, a mechanic, eventually came into the studio fold to repair movie cameras, and Carlo was hired as an assistant at the age of 15. The first films he worked on were two neo-realist classics, Roberto Rossellini's *Open City* (1945) and Vittorio De Sica's *The Bicycle Thief* (1947), on which he was an assistant cameraman. He gradually moved up the ranks, working at Cinecitta and other major Italian studios. In the 1960s, Di Palma gained fame for helping to create the groundbreaking and distinctive looks for two of Michelangelo Antonioni's most highly regarded films, *Red Desert* and *Blow Up*.

The cinematographer's first collaboration with Allen occurred in 1986 on the hit comedy *Hannah and Her Sisters*, which earned several Academy Awards and a slew of nominations, including one for Best Picture. Since then, he and Allen have teamed on *Radio Days*, *September*, *Alice*, *Shadows and Fog*, *Husbands and Wives*, *Manhattan Murder Mystery*, *Bullets Over Broad-*

Dysfunctional yet happy: Di Palma regularly works in the warm tones he and Allen both favor, usually adding a half 85 gel to the lights of their cramped NYC apartment locations. Here, the warmth implies the emotional healing within the Weintraub family (Allen, Helena Bonham Carter and Jimmy McQuaid) at the end of the film.

Photos by Brian Hamill, courtesy of Miramax Films and Harry N. Abrams, Inc.

way, the television film *Don't Drink the Water*, *Mighty Aphrodite*, and Allen's current project. Di Palma's other U.S. feature credits include *The Black Stallion Returns* and *The Secret of My Success*.

Mighty Aphrodite is a contemporary urban fable about sportswriter Lenny Weintraub (Allen) and his attempts to track down Linda Ash (Mira Sorvino), the mother of his personable and gifted adopted son. The comic hitch is that Linda turns out to be a young, unrepentant and lower-class prostitute who prompts Lenny to jump through hoops in an attempt to reform her. Sorvino has called the part "just about the greatest dumb blonde role written in the past 25 years."

One of Di Palma's techniques for shooting successfully on location is the use of a limited number of small lights. "I use as few lights as possible in each scene; I use inky-dinkies, tweenies, pinzas and practicals. Of course, if I want the sun coming through a window I use a 6K HMI, and sometimes bounce a stronger light off the ceiling, but usually I use a 2K at most — no more than that. If I put 10Ks on a catwalk, or a 2K a few feet away, I still have the same density of light," he adds. In addition to wanting to keep the lighting profile low and simple in cramped locations, Di Palma also uses small lights "because I move the camera so much; I don't want to worry about a lot of shadows." The humble pinza light is a particular favorite of Di Palma's, because of its ability to fit into very small spaces.

Di Palma has favored using small lights since he photographed *Blow Up* 30 years ago. This approach not only gives the cinematographer the ability to shoot in tiny New York apartments and other locations, but also adds flexibility, speed and a distinctive look — realistic, yet smooth — to his work. However, the small lights are not a compromise dictated by the space restrictions of location shooting; the cinematographer says that he lights the same way in studio situations.

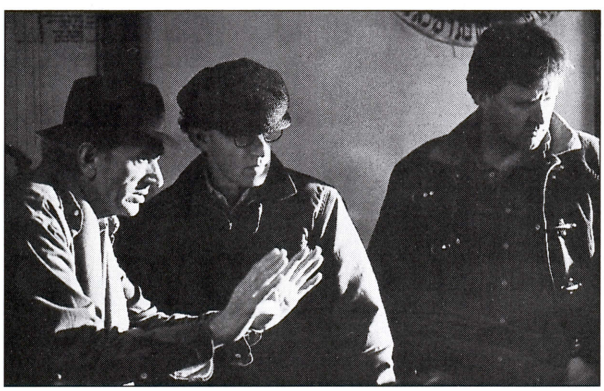
"On *Blow Up*, there was a fire one week before we were to shoot in the club with the rock band [the Yardbirds, featuring a young Jimmy Page]. A set was built to re-create the location, but there was no ceiling. I told Michelangelo, 'I can't shoot here, without a ceiling,' so they built one. I hung my small pinza lights from it, and I was happy!

"They were shooting Kubrick's *2001: A Space Odyssey* in the next studio, and Kubrick's cameraman [Geoffrey Unsworth], who had been shooting mostly with 10Ks, came in and saw my little setup with my few inkies and tweenies and pinza lights and said, 'As soon as Carlo is finished I'm going to use the pinza lights!' MGM Studios begged me to sell them my 50 pinzas, which I did."

A typical lighting truck load for a New York interior shooting day for Di Palma would include the following: two 10Ks, two 5Ks, four 2Ks, 10 tweenies, a handful of inkies and 10 to 20 pinzas.

Mighty Aphrodite showcases several examples of Di Palma's subtle and creative approach to the possibilities of lighting and color photography. In the opening sequence, which features two couples at a New York restaurant, the light is very warm, almost as if the scene were illuminated with ordinary uncorrected household bulbs. This warm look continues in scenes that take place in the apartment of two of these characters, played by Allen and Helena Bonham Carter. "In the restaurant, the wallpaper was a strong red, and I chose to let the reflected light from the walls stay red; I liked that look for the small intimate restaurant," Di Palma says. "Then, in the first Woody Allen apartment, I used a three-quarter 85 gel on the lights, and manipulated the dimmers on the practicals to warm it up even more.

"I wanted it to have a warm feeling because the apart-



Left: ***Di Palma conveys his impressions to Allen. Their remarkable decade of collaboration has resulted in 10 features primarily shot in and around New York City.*** **Below:** ***Kevin (Michael Rapaport) confesses his dreams to Linda (Mira Sorvino) on their blind date. Di Palma, an advocate of uncorrected light, allowed the carnival neon glow of Times Square to bleed over in deep red hues.***

ment was small, and because in those scenes the couple gets a new baby," he adds. "When they moved to the second apartment, I let the light go cooler; it is a bigger apartment and there were a lot more practical lights. Also it was a matter of emotional choice, as the child was no longer small and there was more tension in the relationship between the husband and wife." The final shot of the Weintraub family together, after the rifts have been healed, has the warm look once again.

Warm colors are a signature of the Allen-Di Palma partnership. "Woody and I don't like cold, bluish light," Di Palma said. "Since our first film together, *Hannah and Her Sisters*, we've used a quarter or half 85 gel on the main light on every shot, even indoors. When I first read the script for *Hannah*, I immediately felt that the predominant feeling of New York is autumn. When I told Woody this he laughed and said, 'Carlo, that is very much my opinion.' Ever since then we really haven't used many HMIs outside, except occasionally a 4K. Every time we use an HMI outside we cover it with 216 frost and a quarter or half 85 gel, in addition to using the mandatory 85 filter on the lens. I like this combination for the feeling of autumn it gives, the warm light. It reminds me of Rome in the winter; a few times at that time of year in Rome there is bright sunshine, but then at sunset the light turns brown and yellowish and it is beautiful. When I paint those scenes I am always carefully mixing colors, brown and yellow, to create the feeling of the winter sunset light in Rome."

One of the bigger location challenges of *Mighty Aphrodite* was working outdoors in a Greek theater, the Teatro Greco in Taormina, Sicily, shooting scenes involving a spunky Greek chorus. Allen, Bonham Carter and F. Murray Abraham (as the chorus leader) were also on hand. These scenes, in which the chorus kibitzes comically about the characters' family follies, are intercut throughout the film. The challenge was ameliorated somewhat by Di Palma's familiarity with the quality of the light in the region. "The light there at that time of year is wonderful," Di Palma says. "For four or five hours a day I was very lucky, but the theater was constructed so that the stage is backlit all day long. I had shot a lot of films in the area, and I know it very well, so I spent a lot of time preparing and planning to shoot in different parts of the theater during different times of day; I knew where the light would be the best in the morning and the afternoon. I had to follow the light very carefully there, and work closely with the choreographer. I wanted to shoot at night with candlelight, as I had done on a documentary there, but Woody explained that it would not cut in well throughout the picture. I think it still would have been beautiful!"

Di Palma compensated for the natural backlight by placing a bank of 4K HMIs far away from the actors, at the very top of the theater. He covered them with a double thickness of diffusion to avoid overwhelming the backlight or creating shadows. In a few scenes where the backlighting was intense, the HMIs were brought down to the floor of the theater and used with heavy diffusion.

Real New York interiors, a feature on most Allen pictures, are a constant challenge for Di Palma. "We treat an interior location the same as if we were in a studio," he says. "On the film we are working on now, we have been shooting for several weeks in a large apartment. In a studio, one has complete flexibility to change the light coming in from the windows, and to change the backdrops. On location I [also] control everything; in this apartment we enclosed the real windows and changed backdrops and lights for many effects, simulating different times of day, seasons and weather."

Di Palma visits each location twice before shooting; once with Allen to determine its suitability, and then again with his gaffer to assess lighting needs. "We have a very good collaboration with [longtime Allen art director] Santo Loquasto, which makes shooting on location a lot easier. And at the locations, Woody always asks, 'Carlo, is this okay for you?'"

The combination of a cramped apartment and a tall actress made for a tight squeeze in shooting complex camera moves in the residence of Sorvino's character. "A good deal of the action in *Aphrodite* takes place in her small apartment," Di Palma notes. "The camera moves were complicated for such a small space, and Mira Sorvino's height complicated things further. I asked Santo Loquasto to arrange the furniture in the apartment to facilitate my moves. I also asked him if we could always keep the shades drawn on the windows in the living room, and if it was okay to not see the window in the bedroom, because not having to worry so much about the windows made our work easier."

Offering her own point of view on the situation, Sorvino adds, "I liked shooting in a real place because you can go and sort of talk to yourself in character. The problem was that it was *very* small, being a real New York apartment. The sound people were occupying the bedroom, and we did my makeup in the bathroom. As a result, there was no real space to go and chill out between scenes."

While Di Palma spends a lot of time on location controlling the light, he will often leave some incidental location lighting in the frame as-is; *Mighty Aphrodite* features several such scenes. When Allen and Sorvino spend time together after their initial comic meeting, they are seated in a restaurant, bathed in Di Palma's warm light in front of a wall crowded with framed celebrity publicity photos (symbolizing the old-time Runyonesque milieu of Allen's character, who writes for a *New Yorker*-type magazine). In the background, the interior of the dingy kitchen is visible as workers, bathed in green overhead fluorescent light, prepare the food. This scene effectively evokes the differences between Allen's character's comfortable, established world and Sorvino's harsher, less secure lifestyle.

Di Palma says he has always used uncorrected light sources in his films, long before it became a popular trend in features, TV dramas and even situation comedies. "All my life, I normally have not corrected incidental incandescent or fluorescent lights,

because it is not good, it is not realistic. Now everybody leaves a warm incandescent or a green fluorescent light in the frame," he chuckles.

"A few weeks ago, on this new picture, we did a difficult location that was completely lit with strong fluorescent lights," he continues. "We just left the fixtures as they were; we didn't replace the bulbs or cover them with correction gel tubes or bring in any other lights. I just put a one-quarter correction filter on the lens. Replacing the regular fluorescent tubes with corrected tubes is something I prefer not to do, because to me they are not really corrected; they're somewhere in the middle. It is much better to leave them as they are and correct a little on the lens. It's more realistic."

Another creative use of real location lighting occurs during a scene in which Sorvino gets to know Kevin (Michael Rapaport), a slow-witted boxer whom Lenny has hand-picked to be her suitor. The young couple have their blind date in a restaurant overlooking the lively, animated neon of Times Square. In keeping with the theme of warm lighting and the carnival atmosphere of the area, the couple is bathed in a deep red glow.

Because Di Palma has used small lighting instruments all of his career, including the days when the highest speed color stock was 100 ISO, he is understandably a big fan of Kodak's fast 5298 stock, which was used for 85% of *Mighty Aphrodite*. "It's a wonderful stock, which makes it easier to shoot with my small lights, and to maintain a small enough aperture to keep the background in focus, which is very important to me," Di Palma says. As a general rule of thumb, he tries not to shoot above T3.5 or 4.

"I also like the 5245; I use it when I can," he adds. "I like the 5293 very much; in Taormina there was too much light to use the 98, so I used 93. I use 98 in the fall and winter in New York for exteriors, sometimes with 30 percent ND; if I were in L.A. I would probably use 60 percent. We do that because we don't want to change films from shot to shot. During the winter in Central Park during the day I cannot use anything but the 500 ISO

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film with no NDs." When shooting overseas, Di Palma insists that his film be manufactured in Rochester. "The European Kodak film is, to me, just not the same quality as the film from Rochester, which I have loved all my life!"

Di Palma is also a staunch advocate of zoom lenses, a proclivity that began when he used an Angenieux to shoot the bulk of *Red Desert*. "When Michelangelo saw what we could do with that zoom, he said, "'Carlo, let's use that always!' To this day I don't like to use prime lenses; I always use zooms, not because I like to zoom in and out [although *Aphrodite* contains its fair share of long, fast zoom shots], but because I move the camera a lot. I move the camera and then I re-compose the shot with the zoom, most of the time in such a small way that most people would not consciously notice. Still, it *is* a composition change. Many of my colleagues all over the world do not like to use zooms."

Di Palma has used Panavision cameras and lenses on all of his Woody Allen films, and he currently favors the Platinum Panaflex and the 4:1 (17.5-75mm, T2.3) and 11:1 (24-275mm, T2.8) Panavision Primo zooms.

One of the hallmarks of the Allen-Di Palma collaboration is the wide range of material, and thus cinematographic styles, that they have executed together. From the nostalgic period pieces like *Bullets Over Broadway* and *Radio Days* to the black-and-white dreamscape of *Shadows and Fog* and the lively, partly hand-held contemporary chaos of *Manhattan Murder Mystery*, Allen and Di Palma are always creating something different. The demands of this diversity can be intense for the cinematographer, as well as for his longtime operator, Dick Mingalone, and first assistant, Michael Greene.

"When we started shooting *Alice*, Woody told me, 'Carlo, this movie is your colors,'" Di Palma recalls. "My mother was a florist, and I like strong, rich colors. When we finished, Woody said, 'Now Carlo, the next movie is my colors, black-and-white!' For me there was no change. While I was shooting *Shadows and Fog* [which was executed entirely on soundstages,] I didn't think, 'This movie is black-and-white.' Of course, we made lots of tests because we were using a different type of slower film, only 200 ISO. Otherwise, I did nothing different: I used the same lighting as I would use for a color film. And when I talked to costume designer Jeff Kurland, I said, 'Forget this is black-and-white,' and so the costumes were very natural. In a few days everyone forgot it was a black-and-white picture. A critic from *Le Monde* said something like 'Carlo Di Palma's black-and-white photography in *Shadows and Fog* is really color photography,' referring to the many millions of shades of blacks and whites and grays."

Woody Allen has worked with other world-renowned cinematographers, including Gordon Willis, ASC (*Annie Hall, Manhattan, Broadway Danny Rose*) and Ingmar Bergman's longtime collaborator, Sven Nykvist, ASC (*Another Woman, Crimes and Misdemeanors*). However, the Allen-Di Palma partnership has become so widely recognized that distributor Miramax included a quote in newspaper ads for *Aphrodite* that read, in part, "New York, as richly photographed by Carlo Di Palma, is again a vivid and surprising place" (Janet Maslin, *New York Times*).

The cinematographer reflects, "People ask Woody, 'Why did you choose Carlo Di Palma?' He always shakes his head and says, 'You know *Red Desert*, you know *Blow Up*?' Woody asked me to work with him 20 years ago, but I was not available; I was busy with Antonioni. Then about 12 years ago I got a call from him about *Hannah and Her Sisters;* four days later I was in New York. Since then we have done many projects together, and I hope we do many more!"

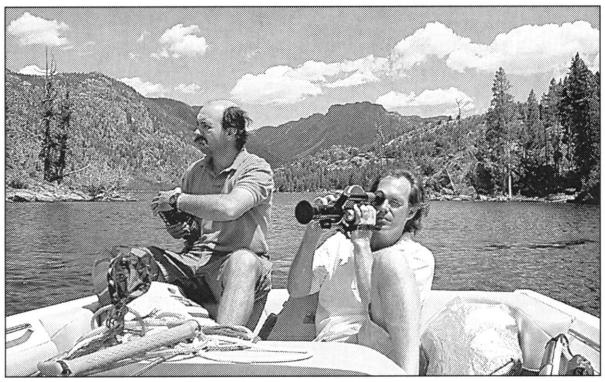
[Ed. note: *Fans of Allen and Di Palma may want to seek out the new book* Woody Allen at Work: The Photographs of Brian Hamill (Harry N. Abrams, Inc.), *which offers many of the veteran set photographer's color and black-and-white images of the director and his various collaborators in action. AC is grateful to the book's publishers for granting permission to use one of Hamill's photos for this article.*]

Racing Along *The Water's Edge*

Filmmakers Mark Trumbull and Gary Maynard visit 48 states on a wild mission to create a travelogue film about waterskiing.

by Mark Trumbull

Photos courtesy of Gary Maynard and Mark Trumbull.



Their Suburban and boat ready, Trumbull and Maynard prepare to hit the road again, shooting their waterskiing documentary on a variety of 16 and 35mm stocks. A modified Bell & Howell (left) provided the slo-mo option for capturing the action.

WHEN WE FIRST BEGAN PLANNING our film *The Water's Edge*, everyone we talked to told us the same thing — that we needed a mountain of equipment and an army of people to complete such a project. The doubters couldn't believe that it was possible for two guys to travel through all 48 continental states, in two months, filming waterskiing.

Gary [Maynard] had been carrying this marathon waterski adventure around in his head for years. "I have always admired Bruce Brown's *The Endless Summer*, and I was convinced that we could do the same with waterskiing that he did with surfing," he says.

Gary approached me to co-produce and co-direct this unusual film with him. I was originally scheduled to spend the summer filming a documentary on industrial pollution. So on the one hand I had exposure suits and toxic waste; on the other, bikinis and waterskiing. Which would you choose?

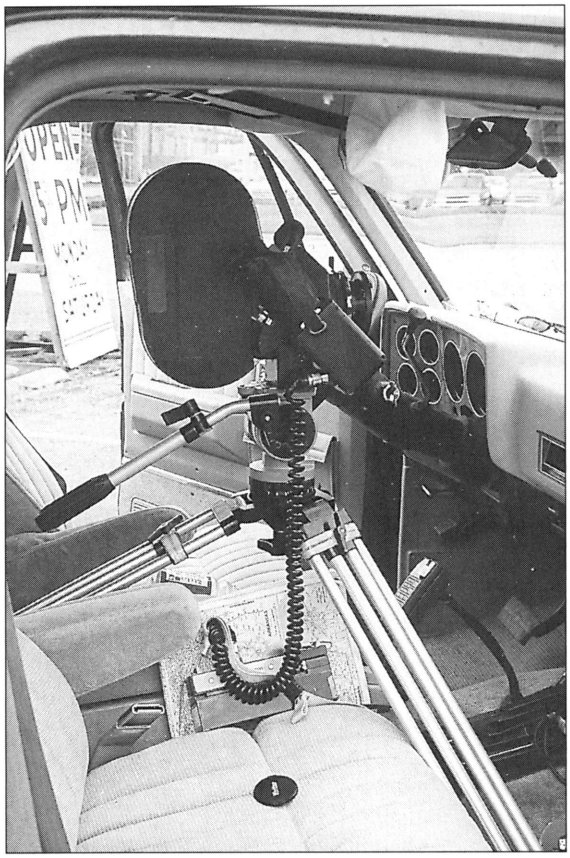
The biggest problem, as always, was the budget. We were barely raising eyebrows, much less our production budget. Even after hacking out every "non-essential" expense, we still calculated the cost at between $250,000 and $500,000. We had less than $50,000, forcing us to dump the second units, all the camera rentals, the grip truck, the generator, the lighting kits, the camera car, the Steadicam, and sound equipment, along with everything and everyone else.

We looked at what we had and decided that Gary's handheld Sony DAT recorder and Sennheiser shotgun could provide "wild yet sync-able" location sound, and that his modified Bell & Howell 16mm could do our 72 fps slo-mo. My Seven Jib, dolly, sticks, and Russian-made 35mm MKA-8M camera, along with a few odd lenses (18mm, 35mm, 50mm, 75mm, 25-250mm zoom) would have to do the rest.

Our budget limitations made our film stock options, well, limited. Even with fake student IDs we couldn't afford the stock we'd need. That meant that the next thing to go was our comfortable shooting ratio of 10:1. It also meant roll-ends and re-cans. These decisions were the turning point for the project: we went from looking at all the ways we couldn't do it to looking for ways we could.

Our film stocks of choice were daylight-balanced stocks, 5245 and 5297 (natural choices, since waterskiing is one of those outdoor sunny-day-type activities). Here on the East Coast, productions that use roll-ends and re-cans go more for the "Can we light it with one inky?" high-speed tungsten stocks. Rich Kalinsky from New York Raw Stock Exchange assured us that he had all the 5245 and 5297 re-cans we could use at a price we could afford. A few rolls of 5296 for the odd interior shot rounded out our 35mm ammunition. The cheapest 16mm we could find was the Fuji 50D and 250D from Studio Film and Tape. We had no idea how we were going to intercut the more mellow colors of one with the more saturated "in your face" colors of the other. But we also knew we didn't have much choice.

Our next big challenge was finding a lab. We called around to all the usual suspects and got less than overwhelming support, until we talked to Guffanti Dailies. Lab manager Lou Cangiano and his staff became like uncles to us.



The Russian-made MKA-8M was almost permanently kept on sticks during the trip — to allow for catching random shots while on the fly.

The Water's Edge was as much of an adventure to film as it is the film of an adventure. During our preproduction planning, Gary — a pitbull with a telephone — had contacted the film commissions of every state and requested a small mountain of literature. Then he got the addresses of everyone in the country who'd ever even seen a waterski. We printed off letters until I thought my mail merge program would explode. From the responses we received, we started sticking pins in the map and connecting them together into an increasingly mind-boggling route. By the time we'd finished principal photography, we knew the names of every little town in every county in every state. It was like working for the Weather Channel. We never did get our locations exactly nailed down. Actually, of the 100-odd locations where we filmed, only about 25 had been pins in the original location map.

After completing our extensive preproduction planning, it was time to remove the rear seats from my Suburban, load our gear and set off for parts unknown. In the best tradition of independent filmmaking, we had no script, no stars, and no crew. What we did have was 50,000 feet of film, 61 days, pockets filled with credit cards, and most of America waiting to be explored.

The 8M's padded case was quickly abandoned for the much more practical "wedge it behind the driver's seat" storage method. This method was working great until we stopped one rainy night after driving on a bumpy back road in Arkansas. As I opened the Suburban's back door, the camera, with our workhorse 35mm lens attached, did a nearly flawless back-gainer out of the truck. "Was that the camera that just hit the cement?" Gary asked. "Yeah," I replied, "but I think the puddle broke the fall a little." We brought it inside, dried it off and ran off a few feet of film. The camera was fine; it hadn't even jumped a sprocket hole. After that we were much more careful; we wedged it behind the seat and put something heavy on top of it.

The production schedule we'd worked out called for filming in the wonderful afternoon light (I was looking for sidelight and interesting shadows on the water). We had planned to follow up a productive afternoon's shooting with a nice dinner and then some bed rest. The mornings would be for pickups, and the unfavorable light of midday would be for traveling to the next location. The reality was driving into the setting sun and on into the night so we could try to catch a few hours of sleep. We substituted aggravation for the nice dinners; most of our meals were Gatorade and those little sandwiches you find in the refrigerators at truck stops (my personal favorite was the Dixie Bell chicken salad — available at finer truck stops throughout the South). Mornings became a time for Gary to set up the next day's location using the phone at the motel; you never can get a cellular phone to work in the middle of an Indiana cornfield that's bigger than Rhode Island. The only times left for filming were those prime hours between 11:00 and 2:00. Needless to say, I was not pleased.

There's something about cleaning and properly maintaining a camera that loses its appeal at 2:00 a.m. after a 19-hour day, so we didn't do it. The 8M handles this sort of treatment better than most cameras. I think the secret to this is the design of the magazines. The 400' vertical displacement mags are simple two-roller, two-sprocket affairs which incorporate a film channel and the pressure plate. We found this setup to be very gentle on the film. We had very little emulsion dust, virtually no film chips, and our negative was never scratched. We also had very few camera jams (four or five in all) during the entire trip. Feed and take-up loops are formed during the "Zen changing bag" ritual and not during the "We're losing the light!" ritual. All of the film-handling apparatus (except the claw) resides in the mag. After a quick inspection and a shot of compressed air, you're back in business. The whole unit snaps onto the back of the camera body, which makes changing mags a 10-second, one-hand operation. If you get the odd camera jam, the problem is all in the mag. You can pop in a fresh mag, continue filming, and deal with the jammed mag later. This is a very convenient feature when you're at 8000' in a glider over the Nevada desert.

The 8M uses a Russian OCT-19 lens mount. A keyway locates the lens and a rotating clamp holds it securely in place. Its open design makes it easy to check for any of that ubiquitous Moab grit which may leave the lens slightly off-axis. It also has the added advantage of making lens changes fast and fairly foolproof even in clutch situations. The mount and lenses are also convertible to PL or Nikon, making the 8M compatible with other lenses and camera systems. The quality of the Russian lenses still amazes me. These lenses are a byproduct of Cold War spy satellite optics research and, I think, rival any in the world. We ran a quick test before we left and were very pleased with their performance, from wide-open to closed apertures. There was a little bit of vignetting in the corners at maximum aperture, but it wasn't bad at all.

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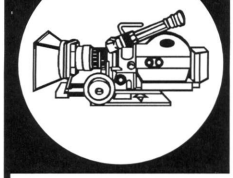

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plex, delicate, or maintenance-intensive would have been the end of us. Simplicity and reliability became key factors in our success, and the 8M is about as simple and reliable as you can get. The film-advance mechanism utilizes a single claw with an extended dwell time to hold the film for exposure. We found that this technique delivered a nice, steady image. There is also a single-registration pin option.

However, silent operation is not one of the 8M's strong suits. Though we've never measured the noise level, you wouldn't want to shoot sync sound in an elevator with an 8M. There is a barney/blimp setup under development, but I haven't tried the prototype yet.

The 8M also has a matched baseplate and 15mm rails. The rails are compatible with Arri 3 accessories, making it convenient to build a studio setup with readily available components. The matte box is just a hair under 6 x 6, so standard 6 x 6 filters need to be slightly cut down. There are slots for two filter elements, one fixed and one rotating. The 8M camera package includes a nickel-cadmium battery and charger. These simple, inexpensive batteries can run four to five 400' film loads on a charge. The charger does a great job of maintaining the batteries, even if it does buzz like a pacemaker on steroids. The system runs on 12v DC and an optional XLR cable makes the camera compatible with other battery belts or blocks.

The 8M's simple, rugged design make it capable of doing things that other more delicate cameras can't. Its low cost makes you willing to do things with it that you just wouldn't do with other cameras. We mounted the camera on the truck's outside mirror. We wrapped it in plastic and ran the Niagara River rapids in a jetboat. We drowned it beneath the roostertail of skiers. We strapped it to a saddle and filmed the Wyoming ridge tops. We baked it in the California desert. The only problem we ever had was when I reversed the power leads while resoldering the connector on a frayed power cord and fried the motor electronics. MKA overnighted us a replacement and we were back in business before Gary

got off the phone the next morning.

During preproduction, Gary had gathered together every bit of waterskiing footage he could lay his hands on. We figured out what we liked, what we didn't, and what we could do that was new and better. I had a pretty good idea of how I wanted to shoot most of this stuff — as good an idea as you can have when you don't know exactly what you're going to shoot. When the reality of our schedule, the number of locations we'd be shooting at, the number of setups required per location, and the size of our crew list finally hit home, I was close to despair.

On location we didn't have time to mess about selecting filters, and our lighting kit consisted of a half-sheet of foamcore buried so deep in the truck that we didn't find it until we got home. We felt like poster kids for the Available Light Foundation. It became a simple matter of f22 (it was, after all, noon in the desert) or f2.3 ("I don't think 20 footcandles is enough light for the 5245"). We'd have faces moving from f32 to f5.6 with a constant f22 background baking under the noonday sun. We had to deal with the astronomically high contrast ratio somehow: no stock could dig that deep and still hold up. I had a ½ Ultracon filter which I hadn't had time to test before we left, but I was hesitant to use it without having any idea how things would turn out. I had lost hope for the deep shadows, the highlights were going to wash out, and the subject moving from one extreme to another was going to become an unwatchable kaleidoscope — all was lost.

All was lost, that is, until I stopped doing all of the normal things — like controlling the light to make the shot come out as I had envisioned it from the idyllic confines of the office. I came to realize that I could never orient the light to the scene. I seldom had the camera angle I really wanted to create the desired effect. I couldn't even orient the scene to the light. I had to design the shots so that they made the best of whatever bad situation we had. We'd talk about our options and then decide to either shoot a wide silhouette, a tight shot with the background washed out,

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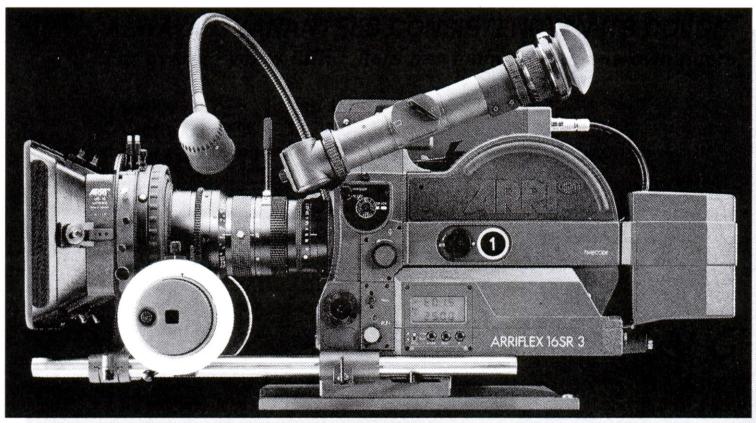

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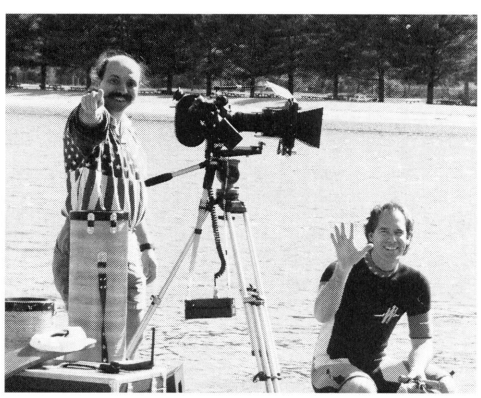

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a down angle with both subject and water properly exposed, or whatever. As a result we exposed for the background some times, the subject other times, and sometimes for "that neat-looking rock over there." This gave us the "opportunity" to create a unique visual style for the film which dances your eye around the frame because the "subject" of the shot is sometimes the background.

One of the advantages of this "play 'em as they lay" style was that most of our locations dictated how we shot. Our North Dakota location was in the middle of a lake; everything was shot from in the boat. Colorado had no shore line, so we shot from in the boat and from a dam 60' up. Mississippi was a swampy wilderness; we shot through dead trees along the banks. We also sat Gary in the middle of the river on a life jacket with his head and the camera just above the surface as world champion barefooter Ron Scarpa skied right over him. Illinois was bordered by a cornfield on one side and an interstate on the other. We shot a down angle through the corn, hiding the road as much as possible. Each location, while having a unique set of problems, forced us to employ unique solutions. In the end, this gave the film a sort of wide-eyed innocence — which, oddly enough, was what we were looking for anyway.

We became always conscious of the subtle changes in the light and our surroundings. We would drive along and play "name that f-stop." Gary would spotmeter out the window and I would estimate the stop for a given film speed and frame rate. Frequently we would see something interesting, jump out, grab the camera and start filming. The ability to accurately assess the light became critical to our success. Our waterskiing shots were filmed as they happened, without the possibility of additional takes. We would frequently be about one quarter of a mile apart, shooting coverage of a skiing sequence from different angles. We didn't have the luxury of waiting for the spotty clouds to pass. By being constantly attuned to the light, we could switch gears on the fly, splitting ratios as re-

quired between subject and background in the changing conditions. Talking on the radio between shots helped keep the exposures close enough so that we were fairly sure we'd have something to cut together.

Still, we filmed when it was too bright and when it was too dark. We filmed when ESPN's videocams couldn't even see an image in their finders, and we even filmed barefoot night jumping in Miami. Yes, that's right, we're talking barefoot, jumping, off a ramp, at 43 m.p.h., at night. The 8M's rotating mirror shutter, coupled with the simple optics in the viewfinder, yields a very bright image. The standard viewfinder is rotatable, but the image does not remain upright due to the simple optics. A fully orientable finder is available, but the extra glass necessary for the upright image adds to the weight. One useful feature that I missed having was either an adjustable shutter or replaceable shutters at different angles; the standard 150-degree shutter was a little too open for most of our fast-paced action.

Much of our filming was done handheld, and the 8M excels at this. The unit's lightweight, compact design makes it possible to squeeze into places you couldn't get into with other cameras. The camera is held out in front of you with your elbows resting on your chest. The optional 500' horizontal displacement magazine rests comfortably on the shoulder. This setup, though presenting a larger profile, is well-balanced and even more comfortable. The new and improved camera motor runs crystal-controlled from 8 to 60 fps and pivots to the front, making it a more convenient handle for handheld work.

Occasionally, we would use the video tap. There are three different types available for the 8M. One is a beam-splitter that permits the finder to be used as well. The second is a simple device that clamps over the eyepiece. I use the third type, which replaces the finder optics completely and offers the lightest weight and most compact profile. With the video tap connected to a pair of Virtual Vision glasses we found that we had many of the capabilities of camera

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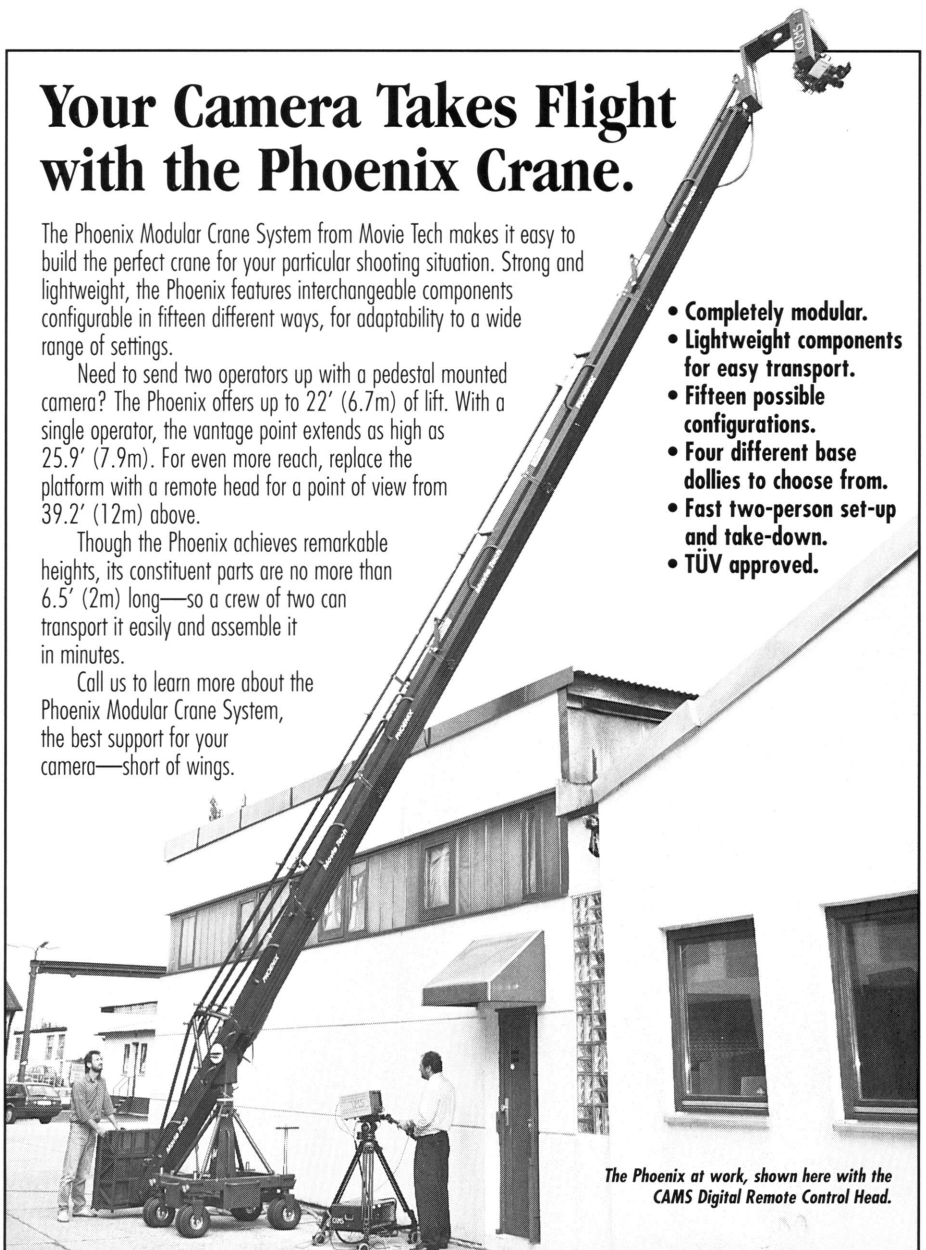

The Phoenix at work, shown here with the CAMS Digital Remote Control Head.

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During a shooting day, we'd leave everything fully assembled — the head on the sticks, camera on the head, lens fixed, matte box on. I was developing a groove in my shoulder from flopping the 70-pound rig over it. We created what we called our "front box," a five-gallon plastic bucket with a nylon cover with pockets on it originally developed for tradesman's tools. Into the pockets went everything we'd need for shooting at a location: mags, meters, batteries, lenses, sound gear, ASC Manual, walkie talkies, lunch, film changing tent, tools, etc. I'd grab the camera, Gary would grab the front box and we'd go trudging off into the bush, or onto a boat, or into a plane, or onto a horse. You get the idea.

The Water's Edge is a film that's as much about the places we went as it is about the people we found there.

Then, we'd shoot the whole place: establishing shots, interview, skiing shots from shore, skiing from the skiboat, skiing from another boat, slow-motion skiing, cutaways of the boat driver and observer, and anything else we could think of. There were typically between 12 and 20 setups per location, all done in three to four hours from the time we drove in until we had to jump back in the truck and head off to meet some newly found friends.

Dealing with dailies was another big challenge, since we never stayed at any one place for more than a few hours. Once a week we'd overnight the lab a box of film. They'd process it and Rank it to ½" tape. When Lou was finished viewing the dailies for problems he'd call my skypager. I'd cellphone back to him with the name of the motel where we thought we'd be staying that night, and he'd overnight the ½" tape there. The next morning, with a little luck, the tape would be at the same place we were. Nothing to it really.

The Water's Edge is a film that's as much about the places we went as it is about the people we found there. As a result, during our 61 days of principal photography, we traveled 19,000 miles and filmed at over 100 different locations. We came to realize that there is a big difference between "shooting on location" and "location shooting." Shooting on location is like a studio away from the studio. Location shooting is a bit different. You are moving so fast and covering so much ground that it starts to change you a little. You start to listen to country music. You wake up in the morning and can't remember if you're in Wyoming or Utah. You'll refer to the map in terms of "How many inches do we have left on that big blue line?" But every moment is a real moment as you head off into the unknown, trusting in luck and the strength of your own good intentions to make everything come out right.

Welcome to the Jungle

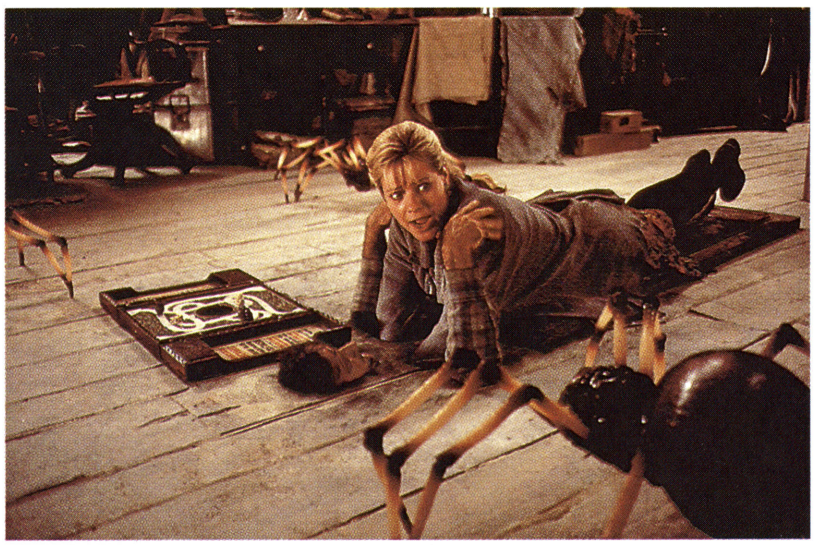
Director Joe Johnston reteams with ILM to create effects for his animal-filled fantasy, *Jumanji*.

by Ron Magid

WHAT IF A GAME TOOK OVER your life?

That's the question posed by *Jumanji*, director Joe Johnston's fantasy film follow-up to *The Rocketeer*. The title refers to an antique boardgame in which players blaze a trail through a savage jungle to reach a lost city. There's just one catch: every time the players roll the dice, some aspect of the jungle magically invades their life: monkeys trash their kitchen, rhinos stampede through their halls, or a monsoon brews in the foyer. And the only way for the players to stop the madness and escape with their lives is to finish the game.

While creating a horde of visual effects for *Jumanji*, life imitated art at Industrial Light & Magic as Northern California's effects braintrust overcame numerous technical hardships and tragic setbacks to finish the film. With it, the company expanded the capabilities of computer-generated (CG) characters beyond the high-water mark they set with *Jurassic Park*, creating 12 full minutes of believable, photo-realistic animal animation. That's almost double the amount seen in *Jurassic Park*, but creating *Jumanji's* present-day menagerie — including lions, elephants, rhinos, monkeys, mosquitoes, bats and pelicans — presented unique challenges. "It was a much bigger film for us," says visual effects producer Mark Miller, who shot *Jurassic Park's* background plates. "We were taking up where *Jurassic* left off, but instead of creating animation and textures for dinosaurs, we were re-creating animals that everybody's seen."



Photos by Sean Casey and Rob McEwan, courtesy of Columbia/Tristar and Industrial Light & Magic.

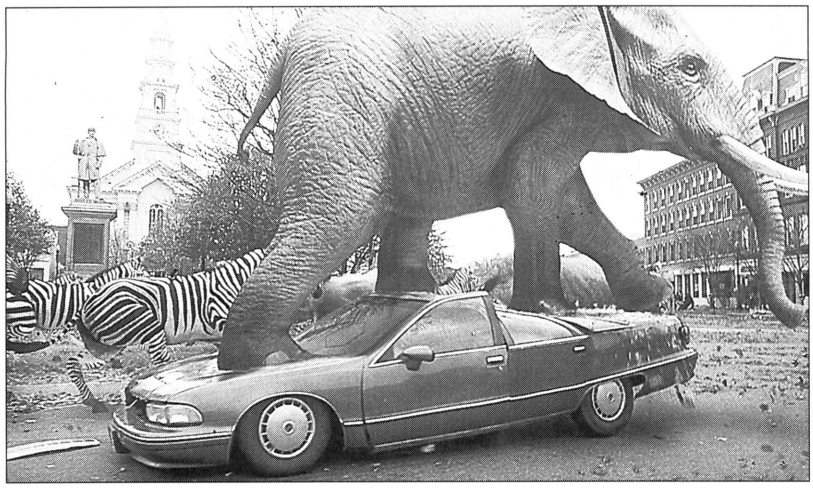
Such familiarity might have bred contempt had the digital animals missed the mark, but many viewers won't recognize ILM's unique contributions even as they appear on almost each roll of the dice. "None of the sequences were similar to the others, so we had to build each new creature or effect from the ground up," Miller explains. "We put our strongest CG supervisors on each self-contained sequence: Carl Frederick was technical director on the lion, pelican and living vine shots; Ellen Poon dealt with the stampede animals and final vortex; we gave Doug Smythe the monkeys; and Jim Mitchell did the quicksand, the bats, and the mosquitoes. There were a lot of problems to deal with in a short time, so we let each supervisor solve their own."

Overseeing it all was visual effects supervisor Steve Price. One of ILM's most respected animators — he brought *Jurassic Park's* infamous T-rex to life — Price had successfully segued into supervising effects for *Schindler's List* and *Maverick*. Prior to *Jumanji*, Price also laid much of *Dragonheart's* groundwork, and had to choose between the two projects. When Johnston insisted that he didn't want to employ any live animals, Price was intrigued by the challenges of creating photo-realistic CG performers, and chose *Jumanji*. He and Miller met regularly with Johnston and executive producer Larry Franco from April through November, 1994, when principle production began. Throughout this period, Price was plagued with health problems, and by Christmas he knew something was terribly wrong. At the end of January, he took himself off the project and reluctantly handed the reins over to ILM's visual effects master, Ken Ralston. Soon after, Price died of cancer at the age of 34.

"It was a huge decision for him to say, 'I'm not healthy enough to do this anymore,'" Miller recounts. "It was a tough time in the production, but he left his mark on it. His work will live on."

During preproduction, Price met with Johnston and Franco

Top: Jumanji *costars Robin Williams (trapped in quicksand-like attic floorboards) and Bonnie Hunt are menaced by Amalgamated Dynamics' mechanical spiders. While some creatures were a blend of animatronics and CGI, others existed solely in either effects domain, such as ILM's fully-digital monkeys (left).*

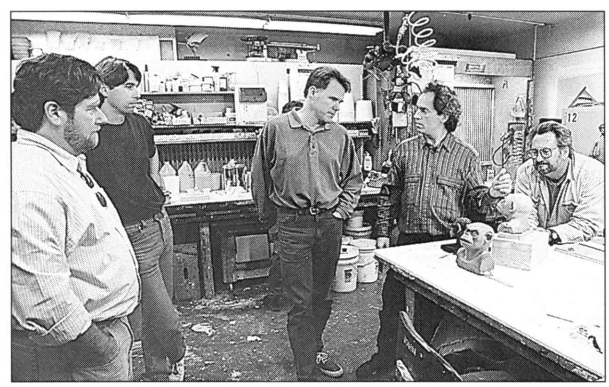


Top: ***Physical effects mesh with CGI as an elephant stampedes over an unfortunate auto. An internal cable rig created the steel-buckling footprints on the prop car, with the digital pachyderm later choreographed to match the imprints and then composited.***
Bottom: ***Executive producer Larry Franco, visual effects producer Mark Miller, director Joe Johnston and visual effects supervisor Steve Price examine maquette sculptor Richard Miller's monkey mock-ups.***

at least once a week, helping Johnston visualize the animals and influencing him to make the designs more realistic rather than fantastic. Ultimately, the director went with animals that looked more aesthetically pleasing than those in nature, but behaved essentially realistically. "Steve was integral in getting this movie off the ground," Miller states. "He had a lot to say about the animals' design, and he also went through the storyboards and broke down the effects shot by shot with Joe, Larry and Amalgamated Dynamics, Inc. (ADI), the company that constructed the animatronic animals.

"After talking it through, we agreed that the monkeys, the mosquitoes and the stampede animals should only exist in CG, while the crocodiles and man-eating plants should only exist as animatronics. However, a few animals required both CG and animatronic versions: the bat, the pelican and the lion."

Prior to the 1994 Christmas break, Price supervised *Jumanji's* plate shoot in New Hampshire for the stampede in the town square. The stampede was the first effects sequence to be shot, so he had his hands full in preproduction working with cinematographer Tom Ackerman and various practical effects artists to determine how to handle the animal interaction in the plates. They decided that the CG animals' contact with their environment would be largely limited to CG re-creations of cars and other objects. However, they decided to handle one remarkable shot, in which a raging



adult elephant tramples a car, semi-practically. "Our first reaction was to build a CG car, so we could control exactly where the elephant's feet fell," Miller recalls, "but we decided to try to use a real car for at least a take. If it didn't work, we could shoot a blank plate and put a CG car in. Steve worked with Stan Parks, who supervised the mechanical effects, figuring out how big this elephant was and in what order his feet would land, creating the exact sequence for crushing each part of the car. Stan's crew built a great cable rig that pulled different parts of the car down at different times. The first take looked so good on playback that everybody said, 'Let's shoot a blank one just in case and move on.' They never used the second car they rigged."

Daniel Jeanette animated the rampaging CG elephant to the movements of the crushing car in the original plate. "It was good to have a practical car there, so we didn't have to animate it from scratch, but the downside was that Daniel's animation was locked into those timings," says *Jumanji*'s animation director, Kyle Balda *(The Flintstones, The Mask)*, who studied traditional cel techniques at Cal Arts. "When the car made a jolt, he had to animate the foot falling on it. Daniel did a fantastic job making it look as if it was happening quite naturally."

The elephant, like *Jurassic Park*'s dinosaurs and all of *Jumanji's* other CG performers, was first modeled as a 3-D wireframe, then animated through its paces for each shot, undergoing a constant layering of secondary animation. "They've pretty much got it standardized here now," Balda says of the process. "Once the models were locked down, the modelers used Softimage to set up the 'chaining' system — the software's interpretation of a skeleton — for each character. After the basic animation was done, we used secondary animation tools to make the animals' bellies jiggle, and displacement maps to give the skin a rough, craggy texture and depth. Lastly, the technical directors comped all the pieces together — the animation, the textures, the paintwork — and rendered each individual shot."

Because the stampede featured a herd of charging zebras, elephants and rhinos, Price asked Balda to devise run cycles for each individual animal, à la *Jurassic Park's* galimimus herd sequence. Cycles are animation labor-saving devices, motion sequences that begin and end at the same point. Once a single 12-frame run cycle was animated, they could be linked together to create as long a run as needed. "Because we had 18 shots of these animals running, Dale MacBeth devised a way to automate the stampede," Balda recalls. "He set up scripts that incorporated run cycles for each animal, which did a lot of the tedious work for us. We then used the time we saved fine-tuning their performances and adding personality quirks on those closest to camera."

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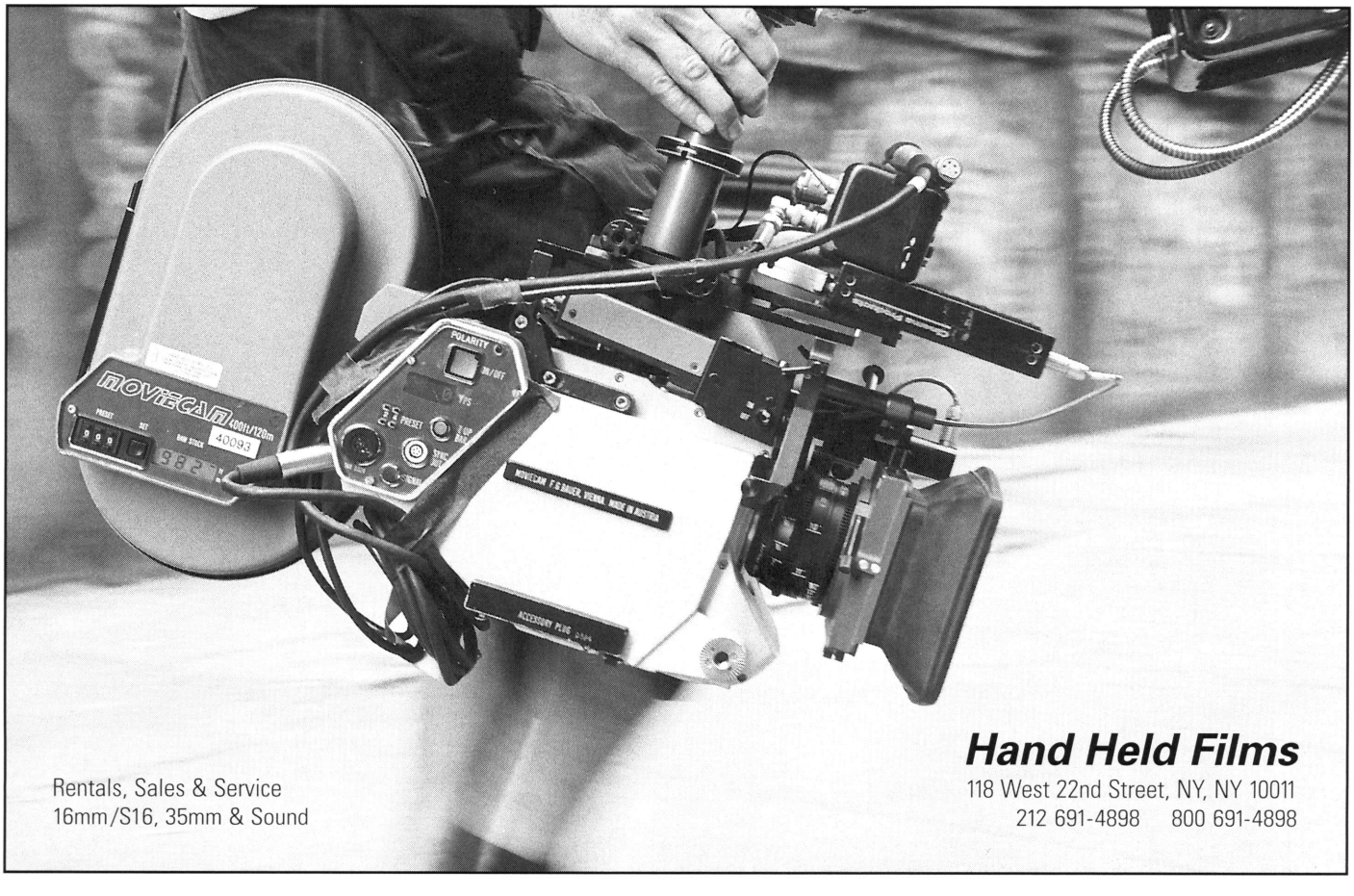

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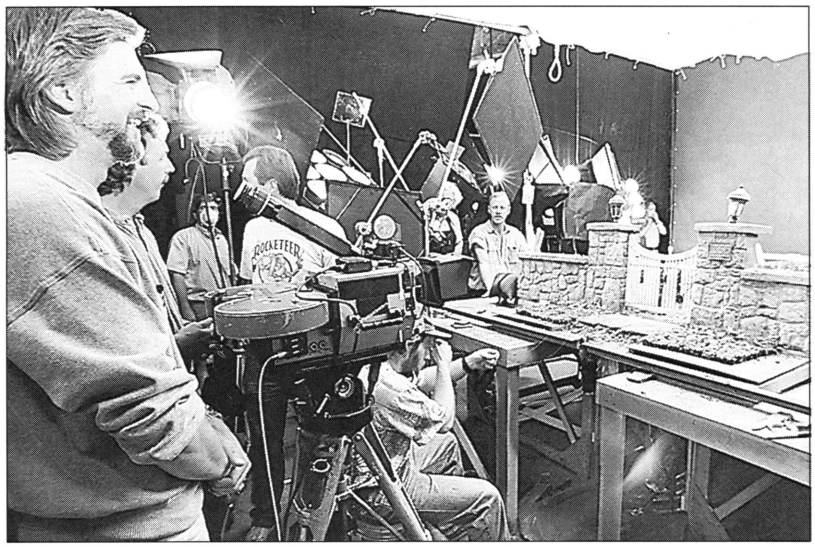

Top: ***Visual effects supervisor Ken Ralston (far left) oversees the forced-perspective model of the Georgian mansion and grounds — ready for the forthcoming monsoon and earthquake that splits the house in half.***
Bottom: ***Chief modelmakers Brian Gernand and Michael Lynch (L to R) prepare to snap their 1/6-scale home like a wishbone — resulting in mass destruction.***

A similar tack was taken for a sequence wherein a pair of rhinoceri burst through a bookcase in the three-story Georgian mansion that serves as *Jumanji*'s primary setting. Their animation and characterization was based on hours of nature videos, the scene of rhinos charging in the John Wayne film *Hatari!*, and a hands-on session with a rhino at the San Francisco-adjacent Marine World animal park. Again, practical on-set effects were combined with ILM's CG rhinos to produce exciting, convincing shots. "They shoved a big rhinoceros-shaped battering ram, painted blue, through the bookcases on-set," Balda says, "and most of the objects moving out of their way were on wires. Then we replaced the blue battering ram with our CG rhinos, and animated them through the scene. About three scenes after that, there's a shot where one of them gores a big Corinthian column in the hall. In that case, we animated the column so it exploded and then fell to the floor."

Price oversaw the first half-dozen stampede shots as well as the earliest shots of the CG bats chasing actress Laura Bell Bundy. And before handing the show over to Ken Ralston, he planned the lion-stalking-through-the-house and the monkeys-in-the-kitchen sequences, and supervised the first few monkey shots. To successfully translate the lion and the monkeys in CG, Price knew he had to devise a means of creating fur with the computer. ILM had previously

jerry-rigged a passable technique for *The Flintstones'* Kitty, but the saber-toothed cat only appeared in four shots, and in any case was based on a cartoon. For *Jumanji*, Johnston informed Price that he wanted a CG lion which could pass for real and intercut with ADI's animatronic version. "Trying to match to a real lion and an animatronic one at the same time was a real source of concern," Miller admits. "From the first day we had the movie, we were throwing people on it."

Price assigned the task of creating a workable hair program to CG supervisor Carl Frederick, who determined that the method created for *The Flintstones'* Kitty, which mimicked the look of hair via texture maps with hair-like cutouts, was ultimately a dead end. Based on Price's concept of modeling every single hair, Frederick and his programmers, led by Jeff Yost, created their revolutionary hair software in under nine months. The program could generate a variety of hair, from the short fur covering the lion's body to the long strands of its mane. "We ended up using two completely different systems for the long and short hair," Frederick says. "The short hairs' shape and other properties were imparted using maps and global parameters a strand at a time. A much smaller number of long hairs were first modeled into the shape of the mane and animated, and then we interpolated between the individual controlling hairs to create the full mane."

When animation supervisor Kyle Balda and his crew put their CG lion through his paces, their task was further complicated by the hair issues. He explains, "In the wireframe stage, we couldn't really see the mane: it looked kind of like dreadlocks, and each lock represented a big mass of hair. So we'd only have a very basic idea of what the mane looked like as we animated it."

Maintaining a well-coifed king of beasts was sometimes at odds with the animation, which often caused the mane to fly around wildly, a glitch that was only discernible after the shots were rendered. To tame the problem, Balda's animators would often re-do shots, restraining the motion of the lion's skin and instituting more controls over the long hairs to settle the mane down. Fortunately, rendering the shots was a relatively painless process. "Hair took longer to render than the average skin texture, but it wasn't unreasonable," Frederick says. "At the beginning, we challenged ourselves to render a million hairs in an hour for low-resolution test images. The long beauty shot of the lion stalking Robin Williams took between three to four hours a frame, which wasn't too bad. That was one of my first shots, so I used as few lights as possible because I was afraid it would take too long. Carolyn Rendu worked on painting the hairs early on, then turned it over to Rebecca Heskes."

As the first shots of the

lion were being animated, a stricken Steve Price left *Jumanji* in the capable hands of Ken Ralston, best known for his association with director Robert Zemeckis, beginning with *Back to the Future* and climaxing with ILM's Oscar-winning work on *Death Becomes Her* and *Forrest Gump*. Ironically, it was Ralston, the visual effects supervisor on Johnston's *The Rocketeer*, who had assured the director that Price was the best man for *Jumanji*.

After accepting the Herculean task of finishing the film, Ralston was in Vancouver the next day to shoot plates — among the first of which were backgrounds for the lion sequence. He often shot an additional plate with ADI's animatronic lion for reference. "We did that with anything ADI had on-set to give us a start," Ralston recalls. "Basically, we walked the lion through the set, putting it above our heads or wherever it would be in the shot. Same with the pelican. We also walked small-scale painted models of some of our CG animals through the shots — the rhino, the elephant — to see how the light on the set fell on them, which moved us further ahead than just guessing."

Upon Ralston's return to ILM, Price walked him through the storyboards and discussed what remained to be completed. Beyond that, aside from looking in from time to time or reviewing shots on videotape at home, Price had passed the baton to Ralston. "By the time I stumbled into this thing, Steve wasn't around very much, so I had to just move ahead with it in my way, and it was not easy," Ralston sighs. "Hopefully it's a blend that works."

After Price left, Ralston finished most of the monkey shots, many of which were based on his predecessor's plans. "Steve helped Joe define the kitchen sequence," Miller remembers. "Joe was going in a lot of different directions, but after several meetings with Steve and I, he discarded most of the fantasy stuff, such as having the monkeys dance like Fred Astaire and Ginger Rogers. Then we walked through the kitchen, deciding what would happen when. There's a lot of practical wirework in that scene, and we shot a lot of variations in

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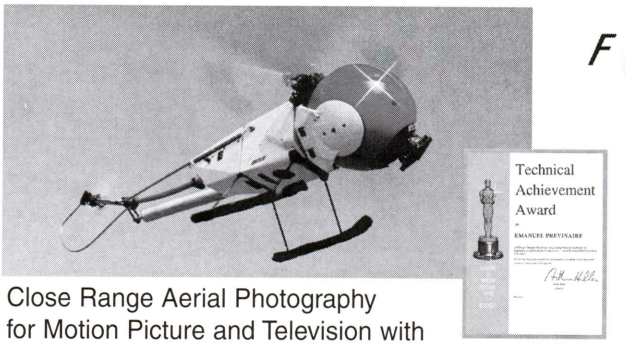

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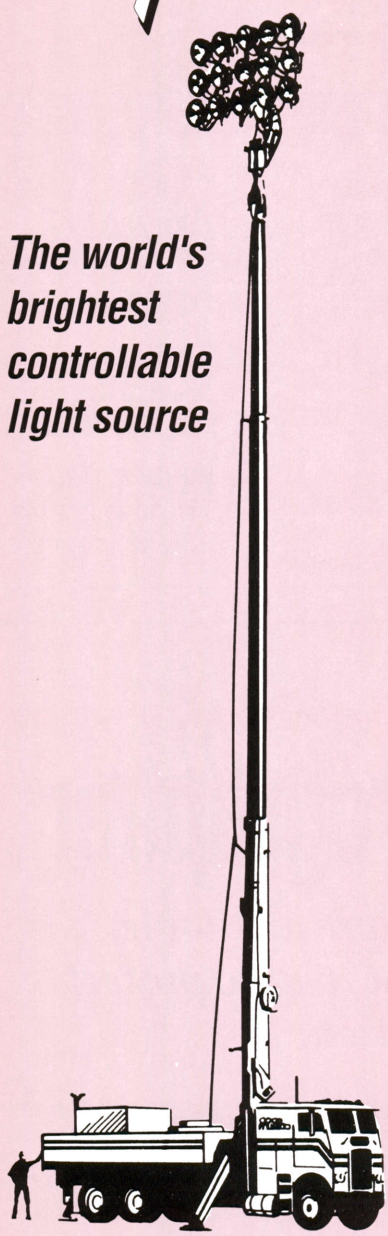
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our plates so we had options in case we didn't want monkeys in certain spots. Anything the monkeys actually threw or caught was a CG prop, but it was nice having real dishes falling and breaking so we didn't have to animate everything in the scene."

Ralston wasn't sure why Johnston wanted the monkeys to act human while other animals were played realistically, but he did his best. "Don't ask me, ask Joe Johnston!" he laughs. "It took me awhile to figure out where he was going with the film. We weren't on the same wavelength at the start, but eventually we came to grips with what he wanted. Some things were handled much more realistically than others: because it's a fantasy, he probably wanted to play the monkeys a little more comically than, say, a stampeding herd of animals. That's Joe's doing. I tried to focus all the different suggestions from everyone who was putting the shots together, then ran them by Joe."

Conversely, animation supervisor Balda enjoyed doing alternately realistic and fantastic shots of the monkeys. "We spent a lot of time working with Joe on how human versus how monkey-like they would be," he recalls. "Whether they stood upright like people or walked like apes varied from shot to shot: when they're running down the street on all fours, they're more ape-like, but when a monkey throws a knife at the kitchen door, we handled that more anthropomorphically because he's doing more of an intelligent action."

Balda describes the 20-plus shots of the monkeys ravaging the kitchen, driving a police car and running through the streets as the most challenging of the entire film: "Because of my character animation background, I thought the monkeys were the most exciting characters because they had a lot of personality. Geoff Campbell, our model supervisor, designed a series of different facial expressions for the monkeys, which we mixed and matched using our proprietary software. We always tried to sneak in facial expressions: after a monkey knocked a cereal box off the counter, we animated him turning around and seeing the kids, and the expression on his face is 'Who, me?' But one of my favorite shots is all about body language: when the monkeys notice a television in an electronics store showing the flying monkeys scene from *The Wizard of Oz*, they cluster around the TV, nudging each other to get a better view."

CG supervisor Doug Smythe and a slew of technical directors experienced fewer bad hair days when laying fur on the monkeys, thanks to some improvements Frederick made to the hair program along the way. "The monkeys were strictly short hair, and we added some parameters to give them more character," Frederick notes. "There was a little more control over the shape of the short hairs, and we also had various parameters for adding different-colored hairs sprinkled throughout to give a little more kick. There were a half-dozen parameters with various controls for direction and speed to allow us to pass a windy force through their hair."

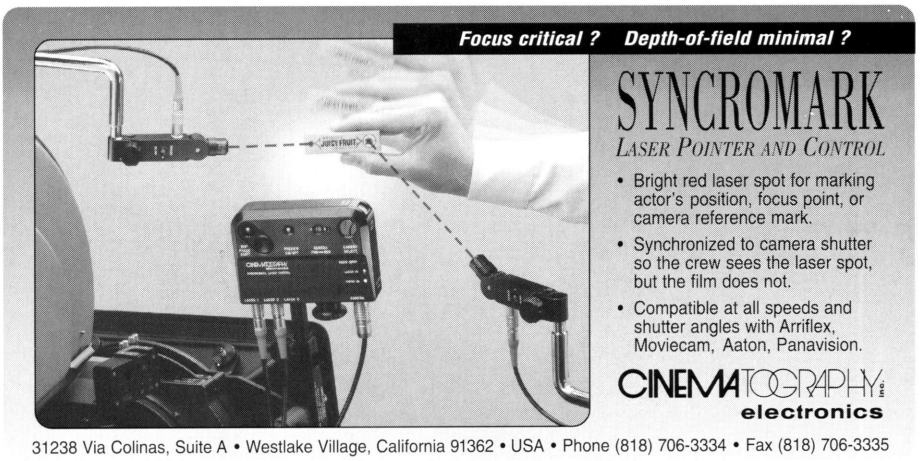
Besides animating a swarm of oversized mosquitoes, a whirl of bats and an arrogant pelican, ILM also created the horde of unnatural events and creatures that plague the hapless Jumanji gamesters. Among these was a wooden attic floor that metamorphosed into deadly quicksand, which blended practical effects of Robin Williams sinking into a soft material floor with ILM's CG animation. The eight-shot sequence was supervised by CG supervisor Jim Mitchell, who drew most of the quicksand animation along with Robert Weaver.

Another bizarre blending occurred between ADI's giant man-eating plant and its complex network of vines, largely supplied by ILM, that first overrun the house and then attack. Like most of the phenomena inside the house, the vines escape, and a massive anaconda-like tendril soon puts the squeeze on a police car. "That was a scary shot," Frederick remembers. "We originally thought we could use a CG car for the whole sequence if it was done in a wide shot, but Joe wanted it up close. So ADI wrapped a vine around the roof of a real police car, which Stan Parks' crew tilted up onto its side,

revealing the undercarriage — and that was the entire practical plate! The rest of the shot involved our completely CG car, which got crushed and dragged through the trees by our CG vine. Animating the vine was pretty tricky because of the dynamics of tightening the vine around the automobile. There were different ideas of how to segue from reality to CG, but we ended up doing a single-frame jump cut from the real car to our CG car. It's a real in-your-face transition that you don't see at all."

That was easy compared to what came next. Working in tandem with Stan Parks' mechanical effects crew, ILM created a wall of water that erupts from the Georgian house, washing two hapless visitors down the street and splitting the residence in half. "The house is filled with water because there's a monsoon raging inside," Ralston recounts with a laugh. "Suddenly the front doors blow apart and this gigantic wall of water washes these two characters away down the neighborhood street. I can't believe it worked as well as it did because it's such a hodgepodge of techniques. Stan Parks set up a false house facade in front of several boxcars he welded together and filled with water. When the water was released, it actually smashed through the doors. Before we did that, we shot a separate pass of the actors being pulled out of frame by cables. We also shot the doors getting pulled out separately so we could play with those. Later, we got rid of the cables and manipulated the speed of everything being pulled out."

Three rather complicated shots followed of the unfortunate visitors being washed down the street. "We first shot the actors being pulled across shallow water by the front doors on an interior set of the outside of the house," Ralston explains. "We dollied the camera past them to imply that they were being carried forward by this river of water. To create the water sweeping the actors down the street, we designed a very complicated setup we called the Canadian Railway, which involved a motorized dolly with a camera that we fired down a long track past a little set we constructed at the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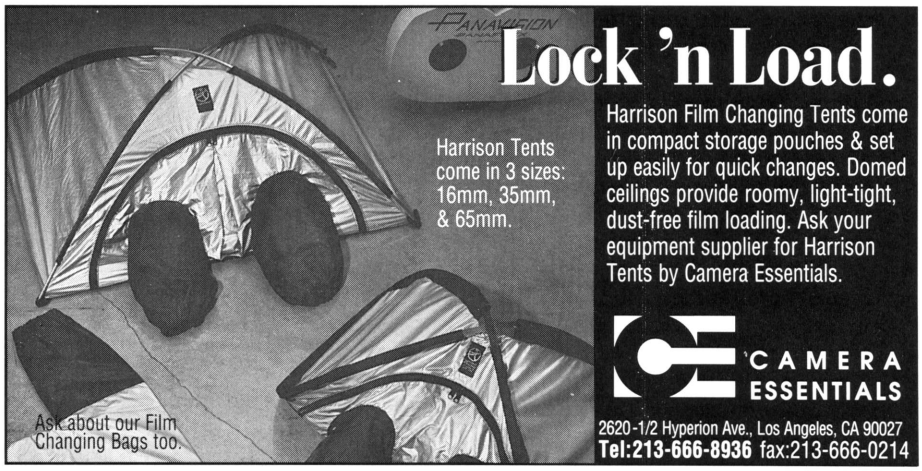
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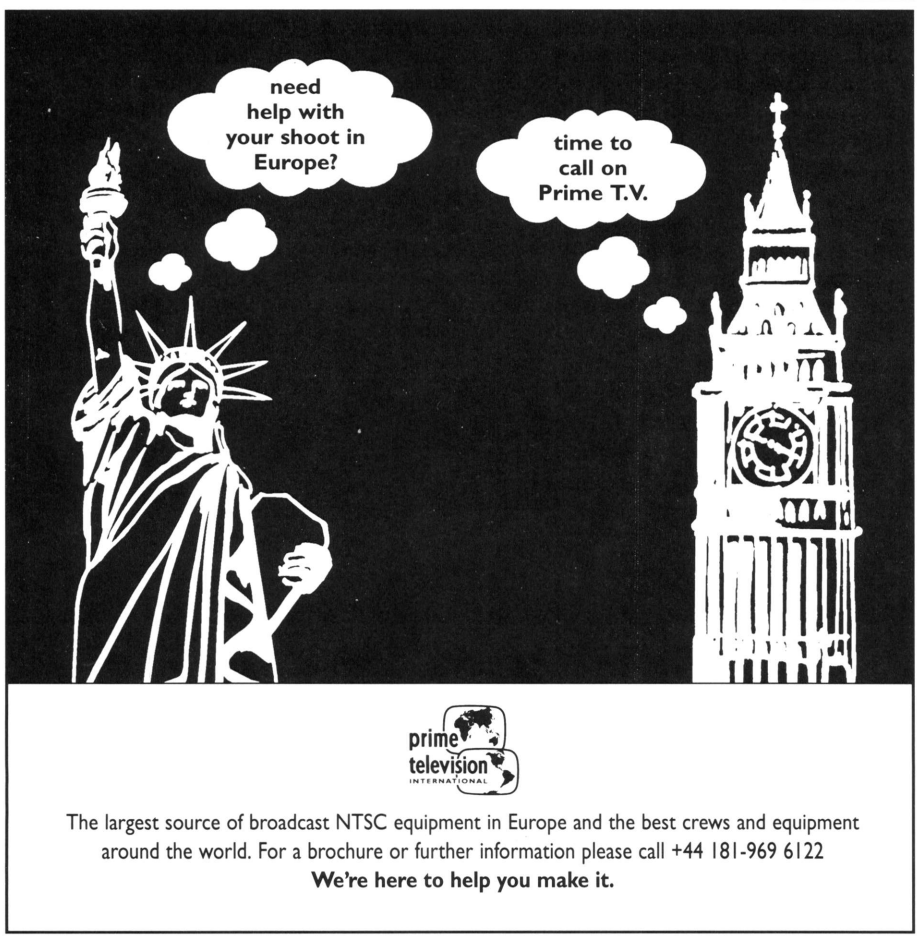
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Vancouver state fairgrounds. We had to shoot all of our backgrounds at a certain speed to match our actors, so we ran the camera at that speed past cars parked along a phony wall we'd built, surrounded by a pool area filled with water which we churned up using little jet skis. Later, we blended that plate of the cars being engulfed by the river and the plate of our actors in the water with some neighborhood plates we shot somewhere else. Lastly, we added a lot of additional passes of water crashing over the cars — match-moving hell — and six months later, the scene looked great!"

After the monsoon, Ralston and company had to create the effect of an earthquake splitting the house apart, using a partial miniature augmented with 2-D computer animation. "The only miniature section was the very center of the house along the split," Ralston explains. "The two sides are the real house plate which we match-moved to the miniature center section as it pulled apart. The walkway leading to the house also split, which required another miniature for the same shot in a totally different scale. The miniatures were filmed traditionally, then blended into the shot digitally. It's much more complicated but that's essentially it. Really, I had the most fun shooting the miniatures!"

Jumanji was the watershed film for a series of transitions at ILM, marking the end of an era. Among the few original members of the first *Star Wars* team still remaining at ILM, Ralston has at last decided to strike out on his own, serving as head honcho at Sony Imageworks and directing the upcoming *Dinotopia*. "This was a good show to end on," says Ralston. "I'm excited by the future, but it's an amazing era for me that's coming to an end. Forgetting all the years and all the history, I'll sure miss all the people here. They've been a great group to work with, and they will always be a very creative force. We made some giant strides on *Jumanji*, technical achievements they'll be able to use on all kinds of films. And now I'll have to be competing with them and I'll be yelling, 'Hot damn those ILMers!'"

At the Masters' Feet

World-renowned cinematographers Vilmos Zsigmond, ASC, Billy Williams, BSC and Lajos Koltai, ASC offer their wisdom to students at workshop seminar held in Hungary.

by Rob Lueker

SINCE THE DAWN OF CIVILIZATION, artists and scholars have attracted flocks of young students and apprentices hungry for knowledge and inspiration. These days the mediums may be more varied but the lesson is the same: how to process a vision through the imagination and onto a canvas to tell a story. For recent visitors to the Academy of Drama and Film in Budapest, Hungary, the "canvas" was film and the forum the Third European Master Class for cinematography students.

Sixteen participating students from film schools in the Netherlands, Sweden, Finland, Germany, Poland, Croatia, the Czech Republic, Austria, Hungary, Britain and Israel came for the two-week seminar taught by Vilmos Zsigmond, ASC and Billy Williams, BSC. Twenty observing students from Europe and America accompanied the participants during lectures and practical lighting exercises at the Hungarian Film Studios in Budapest.

The course was to consist of film exercises shot by the participants, the screening of dailies and discussions of the exercises by the student, his peers, Zsigmond and Williams. The already full days were rounded out by evening screenings of films by the two master cinematographers and other noted Hungarian cinematographers (including Lajos Koltai, ASC), followed by discussions.

The seminar sponsors, Eastman Kodak and Panavision, donated film stock — including Kodak's new 5287 — and two Panaflex GII cameras and Primo lenses. Laboratory services were generously donated by the Hungarian Film Laboratory in Budapest.

The first day began with a short film test of the 5287 stock by Zsigmond as the students looked on. This test was designed to be a guide for the students' own exercises in terms of exposure and lighting ratios. Zsigmond rated the stock at 320 ASA and shot two subjects against a divided black-and-white background, with a gray card held by one of the subjects in the foreground. Three versions were shot in standard key, fill and back light, each with varying amounts of fill. The film would be printed two ways: the first would be a one-light print and the second would be timed to normal, to see how the film responded to being printed up and down. However, Zsigmond stressed the importance of "one-lighting" the dailies "so we cameramen can see our mistakes." When the dailies of the test were viewed, it was found that the 5287 lived up to its reputation as a softer, less contrasty stock. Over the next two weeks, however, the participating students would put the stock through its paces by varying, diminishing, and even eliminating fill light to build in contrast and find the edge of exposure for the negative.

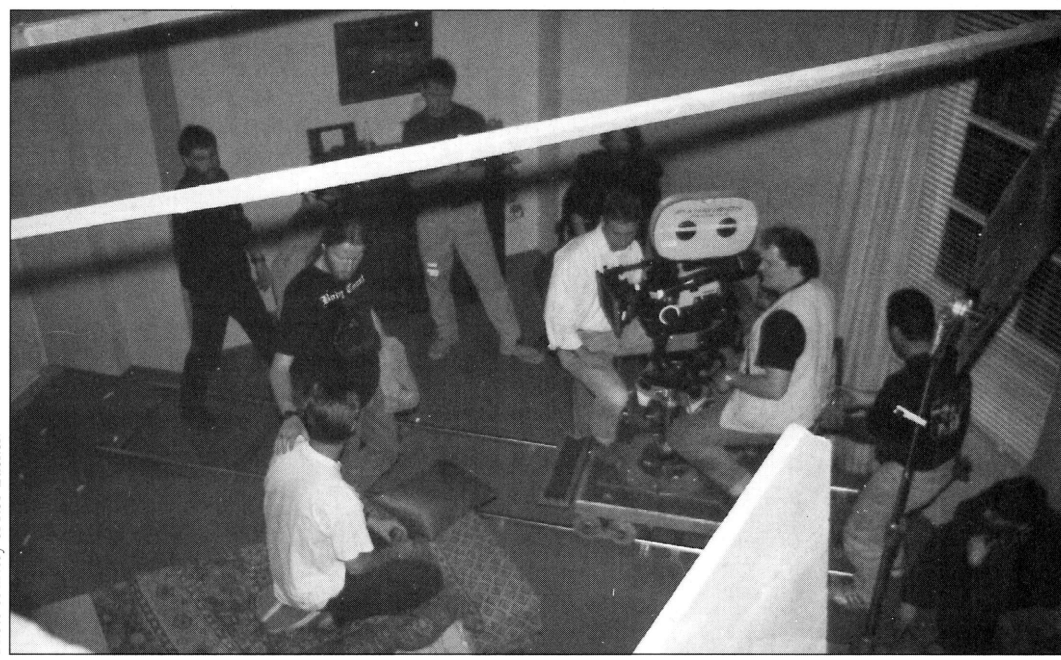

Photo courtesy of Rob Lueker.

With camera gear donated by Panavision and stock contributed by Kodak, the aspiring cinematographers took their visual cues from Zsigmond and Williams during a series of tests.

The first evening's screening was *The Deer Hunter*, for which Zsigmond received an Academy Award nomination in 1978. At that time, the film created an uproar at the Berlin Film Festival when the Soviet Union, dragging its satellite countries along, pulled out of the event, protesting that director Michael Cimino's inclusion of "Russian roulette" scenes portrayed the North Vietnamese people as violent. As a result of the scandal, Zsigmond found an upcoming directing project in Hungary canceled; he also was not allowed to return to his native country for a year.

Speaking about *The Deer Hunter*'s cinematography, Zsigmond recalled that he basically underlit the film, since the story needed darkness. For the Vietnam material, in order to match the stock documentary footage to the production footage, Zsigmond underexposed two stops and push-processed the film in the lab by two stops. This was then duped and printed and then duped and printed again to match the stock footage.

During the seminar's next day, exercises began at the film studio, where the first two participating students stated their inten-

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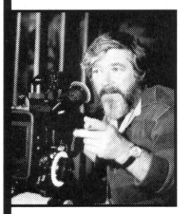

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tions for their exercise — how they wanted to rate the film, their lighting approach, story concept, and any other relevant information. Two sets were built on the large stage, a night interior set designed for the four night scenarios and a day interior set designed for the four day scenarios. Then the work began, with the students choosing "actors" and other crew members from among the other participants and observers.

The students had to shoot at least three shots (six was the maximum), one of which turned to look 180 degrees in the other direction. Another scene required a lighting change during the shot, dimming down the "daylight" and bringing up two lamps gelled with half-blue bounced into two large sheets of foamcore to simulate a cloudy day. For the day interior scenes, two large lamps coming in through the windows and gelled with half orange was the method of choice for most of the students, augmenting that with fill inside the room and a general "daylight" ambience outside the windows, created by bouncing a large source on to the white stage wall.

The four hours allotted for the setup and filming served as a fair simulation of real-world film schedules, where the cinematographer must shoot at a pretty good clip to finish all of the material on the day's shooting schedule. The Hungarian electricians and gaffers, communicating through a translator, carried out the requests of the student cinematographers with efficiency and precision.

The afternoon sessions were preceded by Hungarian director of photography and instructor Tibor Vagyoczky's lottery-style reading of the printing lights from the lab: "23, 24, 27." With that, the student director of photography restated his or her intentions for the completed exercise, the film was viewed, and the student declared whether or not the work had lived up to expectations. After the students offered their comments, criticism, and praise, Zsigmond, sitting patiently, would speak up, usually prefacing his remarks with the line, "If nobody else has anything to say, I would like to add my comments."

Compliments for the overall effort and lighting approach would be tempered with specific tips. For the first exercise, a young woman lay asleep on a bed as the sun streamed in though the windows at a 90-degree angle to the camera; a man entered and put a steaming pot of coffee on the night stand as she slowly awakened. The student shooting it had begun with the close-up shot first. "It is better to begin with the most difficult shot first," said Zsigmond, "so that it is easier to match the lighting in the close-ups and coverage." Other comments arose due to the particular curve of the film stock being used: Zsigmond felt that the 5287 will not give the bright sunshiny feel that other films do, but he also believes that in the shadows it has beautiful details and that it is a good TV stock as well, eliminating the need for a low-contrast print.

The afternoon sessions went on in this manner, interspersed with screenings of the participating students' show reels — here, too invoking comments and questions from the students and instructor.

Zsigmond also discussed techniques used on his most recent film, *Assassins*. He explained that he had wanted to create a film noir-type picture in color using high contrast and monochromatic lighting. To achieve a certain look — sunset or moonlight, for example — he would have the lab make the correction rather than use filters on the lights or lens. This is a time-saver when working on a large stage with many lamps. [For more details about Zsigmond's work on *Assassins*, see article in the November 1995 issue of *AC*.]

Also screened was a film photographed by another alumnus of the Hungarian Academy of Drama and Film, Lajos Koltai, ASC. This was his collaboration with director Randa Haines, *Wrestling Ernest Hemingway*. When asked about the seemingly obvious rear-projected fireworks sequence, Koltai revealed that it was not rear projection at all, but rather a barge positioned behind the actors, from which the fireworks were launched. Koltai also discussed his use of lighting to

flatter stars Richard Harris and Shirley MacLaine.

A screening of *Confidence*, another film shot by Koltai, was followed by a discussion with the cinematographer and the film's director, Istvan Szabo, with whom Koltai had also collaborated on *Mephisto*. Shot on the stages at the Hungarian Film Studios, *Confidence* tells the story of two lovers living in the terror and uncertainty of the Communist era in Hungary. Koltai and Szabo used the paintings of the Dutch painter Vermeer as an inspiration for the film, and relied heavily on single-source lighting and sparse practical lighting to illustrate the simple lifestyle of the two characters. Lajos used a gray and green color scheme, painting set walls gray and using a gray filter in front of the lens for day exterior scenes to enhance the gloomy mood of the film. However, when together, the lovers were bathed in soft, warm, single-source lighting. "If you are lost on how to approach something, go back to the script, the foundation of the story," Koltai advised.

The second week of the seminar brought British cinematographer Williams into the exercises and discussions. Williams received an Academy Award for his work on the 1982 Best Picture epic *Gandhi*. In explaining how he approaches a scene, Williams summarized, "Set up the shot with the director and the operator, determine where the light will come from and what the sources motivating it will be, the amount of fill [contrast], and the quality of the light." Regarding specific lighting effects required during the shot, Williams remarked, "Have a vivid picture before setting out to achieve it." He also had his opinion about the new Eastman 5287 stock: he felt that because the film has its own distinct look, it will not cut well with other stocks. On the subject of matching film stocks, Zsigmond added that on his films *Maverick* and *The Crossing Guard* he flashed the 5296 stock 10 percent so it would match the look of the 5293.

As the exercises continued throughout the two weeks, Zsigmond and Williams visited the sets and offered their advice, often bouncing between the night inte-

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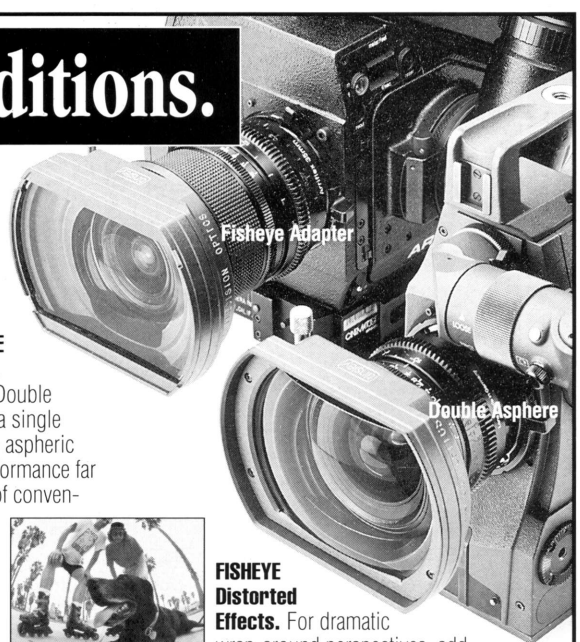

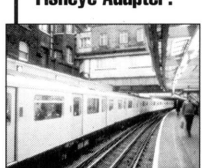

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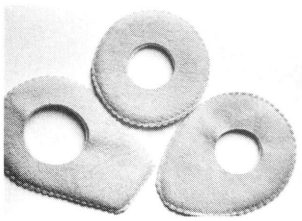

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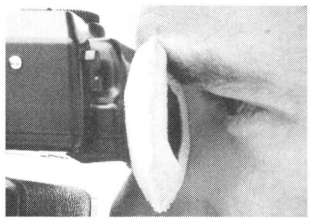

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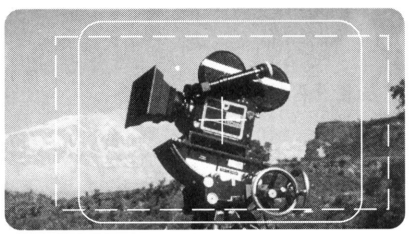

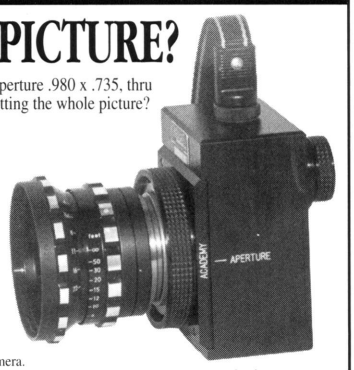

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rior and the day interior sets. During the afternoon sessions with the cinematographers, the students took advantage of the rare opportunity to ask questions regarding technique and style. Zsigmond and Williams would often cite specific films they had shot to illustrate how they had dealt with various problems and challenges. When asked what advice he would give to young cinematographers who want to become stars in the industry, Zsigmond offered, "[Develop] speed and economy in lighting styles. Preparation is important so that when you start lighting, so it will not take a long time."

Eastman Kodak's contribution of film stock was a treat for many of the Eastern European students accustomed to shooting with the East German-manufactured Orvo stock. The Kodak representatives present at the seminar explained their efforts to standardize developing and processing for smaller labs by establishing set procedures by which to mix the chemicals. Because the developing process sometimes suffers at the hands of labs that don't replenish chemicals at the right level or mix them properly, Kodak is trying to introduce "kit" chemistry to the smaller labs that now rely on pulp chemistry. Fortunately for the master class, though, the Hungarian laboratory had its own water and air filtration system, which is closely controlled and meets Kodak's high standards.

The last day of the seminar saw the cinematographers offering up a few final tidbits as the students' notebooks neared capacity. Williams offered, "In terms of light, shade, and composition, cinematography is an international language that transcends all barriers." He added that photography forces one to think in the third dimension, and to create depth by using the relationship of certain tones to other tones. "In that respect," he said, "you are like a painter."

Zsigmond echoed Williams' advice on the importance of visualizing the look of a scene. Knowing what you want before you start lighting, he advised, will provide a vision that can serve as a blueprint for the final scene.

Megalomaniacal director Arthur von Furst (Erich von Stroheim) berates some cameramen. The man with the camera on top of the sound truck is director of photography Edward Cronjager, ASC.

Rediscovering *The Lost Squadron*

Aerial derring-do makes for both comedy and drama in RKO's high-priced flyboy epic.

by George Turner

"HOLLYWOOD GAVE ITS MAGIC SOUL TO MAKE THIS picture!" proclaimed RKO Radio's ace publicist, Russell Birdwell. He was careful to point out that *The Lost Squadron,* the 1932 air epic, was "not a war movie."

Actually, being a strange mixture of several popular themes, this curious but endearing film can't be pigeonholed comfortably into any standard genre. Although it does open with a war sequence dealing with the expected heroism, camaraderie and sentiment, it seems evident that the larger point is that the war has made killers of decent men. The postwar world proves equally cruel to the returning warriors in the course of a complex yarn dealing with malaise, the nation's shabby treatment of its war veterans, thwarted loves, jealousy, madness, murder and sacrifice — all laced with bits of comedy. A *rara avis* of the time, it has a tragic ending. Above all these concerns, it's a satire on Hollywood not to be surpassed in bitterness until the arrival of Billy Wilder's *Sunset Boulevard* 19 years later.

The Lost Squadron began as the brainchild of Dick Grace, a former Navy war pilot and barnstormer from North Dakota. Starting as an all-around stuntman in pictures around 1920, he became a leading stunt flyer and began to specialize in cracking up aircraft. He later organized a squadron of trained professional stunt pilots. While in charge of the flying scenes of the 1927 epic *Wings,* he broke his neck in a crash. While recuperating he wrote magazine stories about his adventures and his first book, "I'm Still Alive," was published in 1931. *The Lost Squadron,*

Joe Biroc, ASC, with a barney-covered camera, rides a crane made from the skeleton of one of the biplanes.

a fling at fiction based loosely on fact, was written in three weeks while he was sidelined with injuries, and the tale was serialized in *Liberty* magazine in 1931. Grace tried to sell film rights to two studios. One turned it down; another took out a 10-day option against $16,000. When the option expired, Grace had 15 cents to his name. He tried again and RKO Radio Pictures bought the story for $20,000 — a lot of greenbacks in '31. Further, the studio hired him to supervise the aerial action.

Years ago, *Lost Squadron* stunt pilot Frank Clarke's friend, the late L. B. Abbott, ASC, described to this writer an incident which probably inspired the most memorable episode in both Grace's novel and the film version. While working as an extra cameraman on *Hell's Angels* (1930) which was being filmed at Metropolitan Airport, Abbott became aware that an obvious antagonism existed between Clarke and another famous pilot. While Abbott and Clarke were strolling among the airplanes, Clarke noticed that the other pilot was loitering suspiciously around the tail of the biplane Clarke was about to fly. "Clarke walked over and asked the man, 'What the hell are you doing to my plane?'" Abbott recalled. "'Aw, just looking around,' he said, and ambled away. Clarke ran his hand over the wires and suddenly gritted, 'Look at what that sonofabitch did!' I could see that he had unscrewed the turnbuckles on the control wires so that they were held by only one or two turns. It would have been suicide to have flown that plane. 'He wants to kill me,' Frank said.'"

It is surely no coincidence that this situation is reenacted in detail in *The Lost Squadron*. Dick Grace and Clarke were close friends; the other pilot had been barred from their stunt squadron. Clarke and his enemy clashed again in World War II, when both were officers in the U.S. Air Force. Clarke died in an accidental crash near Lake Isabella, California in 1948. The other man was killed while doing a movie stunt nearly two decades later. Despite old injuries, Grace also served with distinction in the war and, strange to say, died quietly in bed.

The film begins with an aerial dogfight in the skies over France on the morning of November 11, 1918 as three American aces — Capt. Gibson (Richard Dix), Woody Curwood (Robert Armstrong) and Red (Joel McCrea) — each shoot down a German warplane. At 11 a.m. the Armistice ending World War I goes into effect, and the combatants and their former adversaries wave cheerful farewells. The Americans and their faithful mechanic, Fritz (Hugh Herbert), return to the States to blaring bands, ticker-tape parades, and political promises in a long montage which gradually thins down as returning vets sweep streets and stand in soup-lines. Red goes back to his old job but walks out because a friend will be fired to accommodate him. Woody, formerly wealthy, learns that his crooked partner has cleaned him out. Gibson returns to his fiancee, actress Follette Marsh (Mary Astor), only to find her being kept in luxury by a wealthy man (William Davidson). Dejected, Gibson, Red and Fritz team up and bum around the country. "We've had jobs enough, but you can't hold 'em down if you've got motors in your pants," Gibson philosophizes years later as they join the gallery outside a gala Hollywood premiere of a new aerial epic by Herr Arthur von Furst (Erich von Stroheim), starring his wife — none other than Follette, who has found herself another wealthy provider. Woody arrives with a starlet on each arm and tells his former comrades that he makes $50 per flight as a movie stunt pilot. He then suggests that the four of them form a stunt squadron for von Furst's next World War I extravaganza.

Von Furst is a tyrant who beats his wife and deliberately risks the fliers' lives for a screen thrill. He is insanely jealous because he knows Follette still loves

Gibson, who has fallen in love with "The Pest" (Dorothy Jordan), Woody's kid sister. When Woody becomes too drunk to fly, Gibson performs a dangerous stunt in his place. The tail flaps come off the plane and he crashes into the ocean. After he is rescued, von Furst tells Follette, "I got my crackup and you got your sweetheart back, but next time *one* of us might not be so lucky." Soon after the incident, "Pest" accepts Red's proposal of marriage and Gibson privately conceals his heartbreak.

Follette, convinced that von Furst plans to kill Gibson, tries to warn him not to perform the last dangerous stunt in the picture. Woody, sober, decides to return a favor and takes off in Gibson's place. Red, having seen von Furst loitering near the plane, finds acid on the tail control just as Woody takes off. Gibson follows Woody but is unable to warn him before the wires part and Woody crashes to a fiery death. Half-crazed, Red imprisons von Furst in the hangar office, planning to kill him later. That night Gibson discovers the plan, disarms Red and calls the police. When von Furst tries to escape, Red kills him. Concealing the crime from the police, Gibson flies away with the body in a Fokker biplane and deliberately power-dives the craft to a flaming crash. In the end, Fritz and Woody's dog see two ghost planes in the sky piloted by Gibson and Woody.

RKO, which was born on the eve of the Depression and remained in chronic financial straits, had established recognition as a major studio with the very expensive *Rio Rita* (1930) and *Cimarron* (1931) starring Richard Dix and Irene Dunne. Even though the pictures failed to recoup their high production costs, vice-president in charge of production William Le Baron decided to give *The Lost Squadron* a similarly pretentious mounting with the studio's highest salaried star, Dix, and a big cast. This was part of an overriding determination of the former playwright and Paramount executive to give RKO an image comparable to Paramount's as a maker of epic productions. It would be Dix's first appearance as a flyer, a role he later repeated a number of times. Author Myles Connolly was assigned as line producer. Former newspaper correspondent Wallace Smith and contract writer Humphrey Pearson wrote the supposed final script, which followed the book rather closely except for cutting down the number of stunt flyers to a more workable four.

Le Baron's big expenditures and small returns were being heavily criticized by the head office in New York. When the company's stock fell to 75 cents a share, it was the last straw. It was decided that young but bright David O. Selznick, another Paramount alumnus, would not only replace Le Baron at the Radio studio in Hollywood but would take over the recently purchased Pathé lot at Culver City as well. Le Baron doggedly continued with his program, including *The Lost Squadron.*

Paul Sloane, a diminutive New Yorker, was chosen to direct. The veteran filmmaker, whose career began with the Edison Studio in 1914, had directed Dix's first four starring films at Paramount. His forte was comedy and his previous RKO projects included the successful films *The Cuckoos, Half Shot at Sunrise* and *Consolation Marriage.* Norman Z. McLeod, a tall Midwesterner, was brought in for three weeks of additional direction — a common practice during the early talkie period, when many established screen directors were struggling with dialogue. McLeod had been a cartoonist and also specialized in directing comedies, including two Marx Brothers classics. He also had the advantage of having been a combat pilot for two years.

Sloane commenced principal photography on November 4, 1931, almost at the moment Selznick arrived. Le Baron quickly moved back to Paramount and took some of his associates with him. It was the beginning of a year-long exodus of many of the old guard, some by choice and others by invitation. The new honcho assigned his friend, producer-explorer Merian C. Cooper, and a youthful RKO production supervisor, Pandro S. Berman, to help him assess all properties that were in production and preproduction. At a glance, *The Lost Squadron* looked promising and was allowed to proceed.

Edward Cronjager, ASC, a younger member of a family of pioneer cinematographers, was director of photography. Cronjager was ranked number one on the lot because he had photographed *Cimarron.* Elmer J. Dyer, ASC and Charles Marshall, ASC, leading specialists in aerial photography, arrived with their customized cameras and rigs. Later they were joined by Rob Robinson, ASC. The sets and costumes were designed by Max Ree, a tall Dane who had designed stage productions for Max Reinhart and the Earl Carroll Vanities shows, and films for Nordisk and First National. He had also won an Academy Award for his work on *Cimarron.*

Production was stop-and-go for three weeks as dialogue changes were supplied by two legendary foreign correspondents, Herman J. Mankiewicz and Robert R. Presnell. Upon learning that production was already four days behind schedule after three weeks, RKO's new regime halted production. Eric Linden, borrowed from Warner Bros. for the juvenile lead, was taken out of

Richard Dix watches from the Santa Monica Pier as the crashed plane he was supposed to be floating in is raised from the ocean's watery bottom.

the cast, along with Paul Hurst and Arthur Housman.

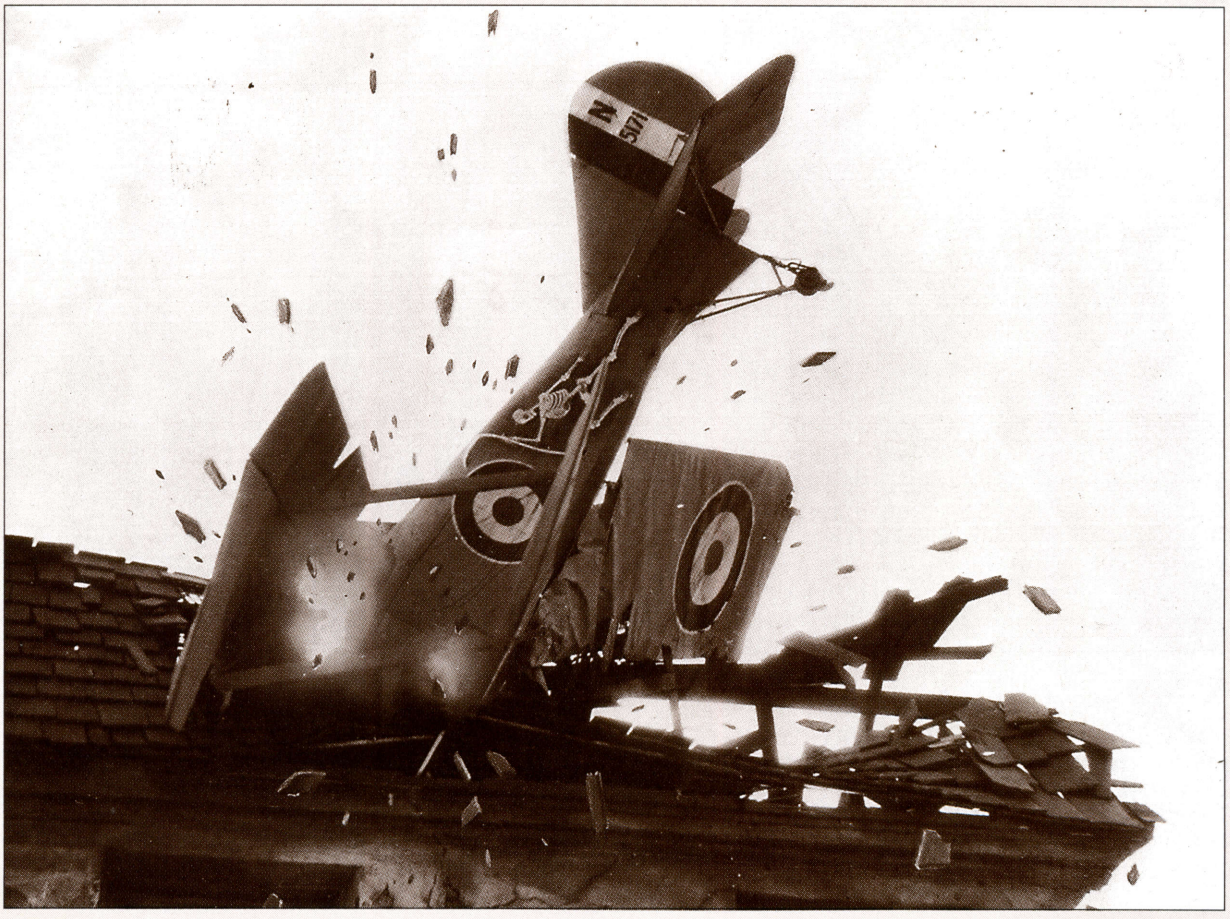
Sloane was supposed to resume shooting on November 28, but the crew was confronted by a distinguished new director, George Archainbaud. Born in Paris and the stepson of the pioneer French director Emile Chautard, Archainbaud had 20 years of experience in the American studios when he tackled this daunting assignment.

Although driven almost to abstraction by the antics of the stunt flyers, who performed more nerve-wracking gags between scenes than they did for the picture, Archainbaud thought he had finished the job. However, a rough-cut of the picture failed to please the studio executives. It was decided that the beginning failed to establish the characters well and that some other scenes, including the ending, were unconvincing. The cost at that time stood at $457,811.95, about twice the average "A" budget at RKO.

Horace Jackson, a top screenwriter and former art director, was assigned to pen added scenes. Among his contributions were a new opening involving a World War I sky battle in the last minutes before Armistice; the three aces getting drunk and discussing their future plans; their arrival in New York; Gibson's awkward meeting with his former fiancee and her protector; Woody's farewell as he goes home; the reuniting of the group; and Gibson's last meeting with Follette. Considerable reworking of the ending sequence was also undertaken.

After more than a two-week hiatus, Archainbaud resumed shooting with Leo Tover, ASC replacing Cronjager. More script changes and suggestions were delivered on January 16. The picture finally wrapped on January 27, 1932. The negative cost of the revisions was $135,101.12, bringing the total cost to $592,913.07. This was an unusually hefty outlay for the time, but the screen action justifies it. Postproduction included a score by Max Steiner which begins with some heavily dramatic title music and the use of patriotic themes. For the ghost scenes at the end he uses an arrangement of "Auld Lang Syne" that he later reprised for the finale of *The Lost Patrol*. However, the score is not comparable to his almost Wagnerian efforts for some of the other big RKO pictures of the time, such as *Bird of Paradise* or *King Kong*. On the main title, Pacific Title's artist lettered the line *David O. Selznick, Executive Producer*, for the first time.

Much of the picture's punch derives from the performances of a first-rate cast. Dix, at that time RKO's reigning star, had an enormous following because of a string of silent successes at Paramount and his work in RKO's *Cimarron* and *Seven Keys to Baldpate*. Here he ably projects the virility and nobility inherent in the role. Mary Astor as the beautiful but weak actress has a basically unsympathetic role which she invests with subtle pathos. Robert Armstrong portrays a lovable alcoholic very well and even has a possibly unprecedented scene in which he laughingly gives Dix "the finger" an instant before he falls to his death. Joel McCrea's lanky good looks and relaxed manner are ideal for his romantic role, and he has some good dramatic scenes with von Stroheim. Dorothy Jordan —



Armstrong's plane crashes into a set — an unplanned moment of spectacular action.

the soon-to-be bride of Merian C. Cooper — brings a welcome softness to the basically masculine drama with her youth and soft southern accent. Hugh Herbert, playwright and scenarist turned comedian, adds considerable humor and heart. Laurence Oliver originally was assigned as Lelewer, but he was replaced by William Davidson as Follette's rather likable "sugar daddy."

The most memorable characterization in the show, however, is the amazing von Stroheim in a bravura performance that caricatures traditionally overbearing Teutonic movie directors. Surrounded by a small army of yes-men and cameramen as his pilots take off, he says, "Be sure to keep them in the cameras — we might catch a nice crackup!" He throws memorable screaming tantrums: "This is supposed to be war! Hell! Death! Destruction! Not a Sunday-school picnic!" After instructing a pilot to bring his plane out of a dive and "kiss" a cannon with his wheels, he tells

his leading man, "I hope he doesn't knock your head off. If he does there's one consolation: you'll never miss it." He also accuses the man of acting like a stuffed cow. He twists his wife's arm and is said to "beat the behoosis out of her." Von Stroheim's death scene is milked for all it's worth: he reacts to the bullet and staggers through the door in one shot, stumbles back onto a landing for a tumble downstairs in the next, rises again on a lower landing only to fall backward down more steps to the hangar floor, and finally expires in a closer shot.

It is generally assumed that von Stroheim was indulging in self-caricature, but perhaps he wasn't. Despite his carefully nurtured reputation as a Prussian martinet, his former leading lady in *The Wedding March*, Fay Wray, found him "gentle and rather shy," and his film editor son, Joseph, said that "Dad was a pussycat." The more likely models for von Furst were Michael Curtiz, whose career had survived the drowning of three extras on the set of *Noah's Ark* at Warners, and Howard Hughes, whose *Hell's Angels* cost four lives.

There are probably more cameras and cameramen on view here than in any other movie. Akeleys, Bell & Howells, Walls and Mitchells are all there, bare and blimped, hand-cranked and motor-driven, all manned by real operators or assistant cameramen in accordance with a studio rule.

Near left: ***Joel McCrea, Dorothy Jordan and Robert Armstrong react to the crash of Dix's plane.***
Far left: ***Mary Astor and Erich von Stroheim as the terrified wife and the tyrannical director.***

Among the nostalgic charms of the show is the sequence shot at Graumann's Chinese Theatre during a real gala premiere. Radio announcer Freeman Lang is in the forecourt interviewing the arriving celebrities, as he did for many years, and there are glimpses of Edna Mae Oliver and comedians Bert Wheeler and Robert Woolsey. Dix and his pals stand next to one of the stone guard dogs that still flank the entrance today.

The crash of Gibson's first plane, including its eccentric flight to the ocean and subsequent dive into the water, was staged by Dick Grace. RKO paid $500 for the old aircraft. An optical printing effect by Linwood Dunn, ASC slowed the action of the splash. The crashed plane was placed inside the breakwater next to the Santa Monica Municipal Pier for scenes in which the Coast Guard boat arrives and Dix is taken from the wreckage to an ambulance on the pier. Unfortunately, as soon as the plane was positioned and cut free, it sank like a sashweight while Dix, thankful that he wasn't aboard, watched from the pier. The scene was made later without mishap at the same location with flotation-equipped wreckage in the water.

Another stunt that went awry turned out much better than anticipated — a perfect example of "falling upstairs" that made amends for the Santa Monica fiasco. The scene, in which Woody's plane crashes and burns, has become legendary as one of Grace's stunts, but he was not actually in the plane. The full-scale aircraft was launched without a pilot down an off-camera ramp built high above the set of the bombed-out town square.

The late Harold Wellman recalled with some amusement that the plane was supposed to arc out and crash in the street, but when the plane cleared the ramp it was lifted by an updraft and flew directly over the cameras and crashed into the roof of the tallest building on the set. Explosives in the aircraft set the building on fire. The flaming plane tumbled down the face of the building. Firefighters rushed into the scene and worked feverishly to save the other sets. Several cameras caught the whole thing, the true embodiment of von Furst's wish for "a nice crackup."

The crash scene was tightened up and several ground shots were cut after the Archainbaud team took charge. Cutting to a different camera angle at the moment the aircraft hit the building dramatized the

Above: ***Detective John Ince almost finds the slain director as McCrea, Dix and Hugh Herbert sweat.*** **Right:** ***Dick Rich, Ince, Herbert, McCrea and Jordan watch the fiery crash of Dix's plane.***

impact. Music and effects recordist Murray Spivack improved the sound of the crash, the crackling of the flames and the hubbub on the ground. The sounds were carried partway through a slow fade to black and then the mournful howling of wind was lap-dissolved in. The fade-in reveals the airport beacon light cutting through darkness, followed by a heart-rending shot of Woody's dog keeping vigil in the ruins, its hair ruffling in the wind. The camera follows the dog as it jumps up and runs across the set to the hangar, from whence Woody's body is being removed to a waiting ambulance.

The bitter wind, clacking shutters and the regular sweeps of the beacon light provide chilling atmospheric effects throughout the 21-minute sequence that follows, most of which consists of the action in the hangar. This ancestral chunk of film noir utilizes weird lighting, amorphous shadows and shots framed by details of antiquated aircraft as events quickly shape the fate of the insane director and his grief-maddened captors. In one macabre moment, Gibson, for the benefit of a curious night watchman, pretends to be conversing with von Furst's corpse, which is propped up in a chair, eyes staring. Some suspenseful moments occur when a detective nearly discovers the body several times as it sits in a cockpit covered by a tarp.

Gibson's spectacular suicide dive utilized a Donald Jahrous miniature intercut with Dunning Process Co. composite shots of Dix in the cockpit of a mockup plane. The scenes of the ghost planes and pilots at the end are composed of negative images optically composited over normal cloud shots.

Theatergoers, men and boys especially, loved watching what studio pitchman Birdwell described as "Batteries of cameras swung aloft against the skies where America's aces streak, plunge, soar, dive, crash at the command of a madman! And a brilliant cast playing like men possessed to bring the ultimate thrill to the screen!"

Credits

An RKO Radio *picture;* David O. Selznick, *executive producer; directed by* George Archainbaud; *from the novel by* Dick Grace; *screenplay by* Wallace Smith; *additional dialogue by* Herman J. Mankiewicz, Robert S. Presnell; *revisions to script,* Horace Jackson; *associate producer,* Louis Sarecky; *photographed by* Leo Tover, ASC, Edward Cronjager, ASC; *scenery and costumes by* Max Ree; *recorded by* Clem Portman; *film editor,* William Hamilton; *music by* Max Steiner; *music and effects recording,* Murray Spivack; *second-unit direction,* Fred Fleck; *aerial photography,* Elmer G. Dyer, ASC, Charles Marshall, ASC, Rob Robinson; *camera operators,* Harry J. Wild *(later ASC),* Joseph Biroc *(later ASC); assistant cameramen,* Harold Wellman *(later ASC),* George Diskant *(later ASC),* K. Norton, J. Strong; *special effects supervision,* Lloyd Knechtel, ASC; *optical effects,* Linwood Dunn *(later ASC); process photography,* Vernon L. Walker *(later ASC); miniature effects,* Donald Jahrous; *composite effects,* Dunning Process Co.; *production illustrator,* Newton Jones; *air chief,* Lt. Cdr. Harry

Reynolds; *technical advisor,* Hans von Morhart; *script continuity,* Trudy Wellman; *stills by* Fred Hendricksen. *Running time, 72 minutes. Released March 12, 1932.*

Gibson, Richard Dix; *Follette,* Mary Astor; *Woody,* Robert Armstrong; *The Pest,* Dorothy Jordan; *Red,* Joel McCrea; *von Furst,* Erich von Stroheim; *Fritz,* Hugh Herbert; *Jettick,* Ralph Ince; *Stenographer,* Marjorie Peterson; *Joe,* Ralph Lewis; *Lelewer,* William B. Davidson; *Leading Man,* Arnold Gray; *German Officer,* John S. Peters; *Policeman,* Edgar Dearing; *Detective,* Dick Rich; *Themselves at premiere:* Freeman Lang, Bert Wheeler, Robert Woolsey, Edna Mae Oliver; *Pilots:* Dick Grace, Art Goebel, Frank Clarke, Babe Green.

Added Credits, Unreleased Version

Executive producer, William Le Baron; *producer,* Myles Connelly; *directed by* Paul Sloane and Norman Z. McLeod; *adaptation and dialogue by* Wallace Smith, Humphrey Pearson; *photographed by* Edward Cronjager, ASC; *assistant directors,* James Anderson, Walter Daniels, Sam Nelson; *recording,* Hugh MacDowell. (Most of the crew worked on both versions.)

Principals in unreleased version only: Eric Linden, Paul Hurst, Arthur Housman.

Information for this article was supplied by Rudy Behlmer, Joseph Biroc, ASC; Linwood Dunn, ASC; Fay Wray; and the late Robert Armstrong, General Merian C. Cooper, Joseph von Stroheim, Harold Wellman, ASC, and Mrs. Harold (Trudy) Wellman.

Olympic Giants

Atlanta-bound athletes are enlarged via clever camerawork to give the 1996 Games an epic feel.

by Mary Hardesty

Imagine being asked to create larger-than-life visuals for a Panasonic spot with 22 composite shots, several non-actor athletes, two dozen outdoor background plates, and a motion-control camera — in six shooting days, for under $1 million, using no miniatures. Oh, and the creative director speaks only Japanese.

Sounds impossible? That's what director of photography John V. Fante thought when Means Street Productions' live-action director, Steve Colby, asked him to capture images of Olympic runners leaping over buildings and landmarks as they raced through Atlanta, Georgia. The finished 60-second spot, "Big Game," contains 43 shots, of which 22 are composites of up to 10 layers. Colby turned to Fante, a veteran cinematographer of mixed-scale imagery, to shoot this complex blend of effects and live action, knowing the cameraman could give the "giant" athletes credible scale and weight.

> "The challenge on my part was to pull this off without a safety net, because we had no time for things to go wrong . . ."
>
> — John V. Fante

"The challenge on my part was to pull this off without a safety net, because we had no time for things to go wrong, given our three-day exterior and three-day stage shooting schedule," says Fante, who is known for his specialized contributions to *Honey I Blew Up the Kid*, as well his work on numerous spots for Toyota, Nissan, Petco, GMAC and Apple Computers.

Arriving in Atlanta five days early, Colby and Fante set about determining the best locations to use for background plates and the best time of day to shoot each location. During the test day they decided to go with greenscreen instead of bluescreen backgrounds for their stage work.

"Each facility has its own preference, but in this case DESIGNefx visual effects director Jeff Doud let us pick," recalls Fante. "We selected green because the brightness level is twice that of bluescreen when using the same level of lights. Sometimes there's a conflict with the colors in the costumes or set, and you have to use blue. That happened recently when I was shooting second-unit photography on the film *Kazaam*."

For the Atlanta spot, Fante used a Fries Mitchell 35mm camera with Zeiss lenses and Kodak's 5293 stock. "This camera is used a lot in composite work because it is reliable, steady and pin-registered," he notes. "We primarily used wide-angle 10, 14 and 18mm lenses for this shoot." To determine the frame rate necessary to properly magnify his athletic subjects, Fante relied on a formula, plus his years of experience. "You take the scale of the miniature — for example ¼ scale — and find the square root of the reciprocal. In this case the square root of four is two. Next, you multiply two by your fps: here we chose 25. For this shoot we were working in 1/12 scale, so the correct film speed came out to 75 to 80 fps." Fante claims you can't really tell the difference between those two speeds. "Certain things, like fire and

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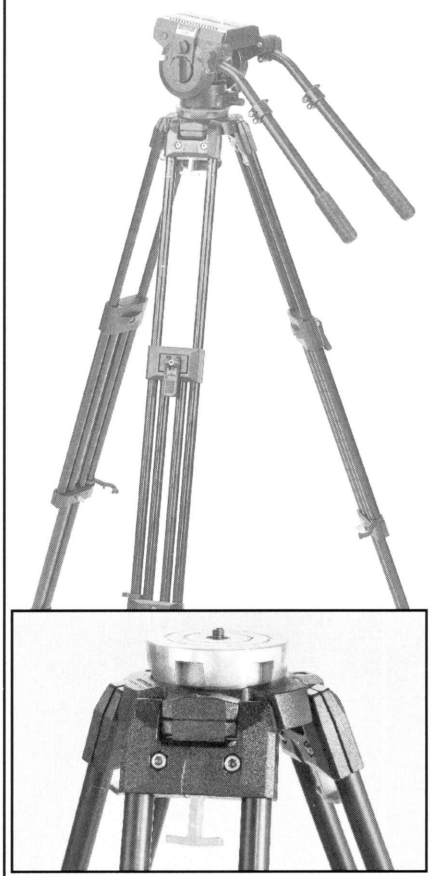

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water, always tend to look better at higher speeds," he says, "so with those scenes you would err on the high side."

Using the Mitchell mounted on a portable motion-control system run on Kuper software and operated by Marty Rosenberg, Fante shot all of the background plates first. Joe Lewis of L.A.-based General Lift put the system together and air-freighted it to the Atlanta location.

"Steve came up with the idea of putting the system on the back of a pickup truck, and quite frankly, I wasn't sure those shots were going to work," recalls Fante. "It sort of pushed me to figure out how to shoot the elements. For the elements coming toward us, we just put the camera on the ground and let the runners go by, but on the side-angle shots, it was a bit more tricky. What I ended up doing was shooting without motion control and moving the dolly in opposition to the runners while keeping the runner's images centered in the frame. That allowed me to get the angular change of the runners, so when it was dropped into the background plate, it looked realistic. In post they now can track a moving foreground object, but they can't change the camera angle, so I used the dolly to do that. I kept the runners centered in the frame to make it simpler to edit."

More details about the Panasonic commercial will be covered in this column in our March issue.

Credits:

Cinematographer: John V. Fante

Client: Panasonic

Agency: Dentsu/Tokyo

Spot name: "Big Game"

Visual effects director: Jeff Doud, DESIGNefx

Live action director: Steve Colby, Means Street

Airdate: Airing internationally now through 1996 Olympics

compiled by Marji Rhea

Digital Camera Filters for Cineon, Keycode Format for 65mm

In conjunction with Eastman Kodak Company, Tiffen Digital, the optics firm's new imaging division, is developing computer software that will replicate the effects of its popular camera filters, to be offered as a component for compositing and retouching programs used with Cineon workstations.

During the first phase of this product development process, the new digital software will emulate Tiffen's line of color filters. During phase two, software emulating the company's diffusion (including ProMist and Soft FX), fog and contrast effects filters will be created. The software is intended for both pre- and postproduction applications. For example, initial stock tests can be shot clean, then auditioned with an infinite number of filter combinations to determine a look. Filters can later be combined without losing stops on the set, as well.

Eastman Kodak has also modified the machine-readable edge print on all of the company's 65mm camera and intermediate films. Eastman Keycode numbers are now encoded at 120 perforation intervals instead of 80. This will enable software developers to write efficient and accurate programs for conforming the negative to video EDLs in all four 65mm formats, allowing producers of ridefilms and other special-venue films to take advantage of nonlinear video editing systems in postproduction. Kodak manufactures 65mm film with keycode numbers compatible with all frame lengths — 5, 8, 10, and 15 perforations — to accommodate the various special-venue formats. The five-perf frame is generally used to produce theatrical features and films for the Showscan process, while the longer 65mm frames are typically used for Imax, Iwerks, and other large formats for theaters at theme parks, museums and other special venues.

Using the new keycode number placement, Crest National Videotape and Film Laboratories developed software that links film productions in the Imax format to the latest digital editing systems, allowing them to deliver video dailies within hours of the delivery of the negative from the film lab.

Eastman Kodak, (619) 438-5250; Tiffen Digital, (818) 843-4600; Crest National Videotape and Film Laboratories,(213) 466-0624.

Crane Base

Chapman/Leonard Studio Equipment's CS Base crane base is designed to carry to carry a Chapman remote or manned crane arm (i.e., Lenny Arms I, II and III) and has a maximum payload of 3,400 pounds. The CS Base has a new Quick Pin transmission, which permits crab or conventional steering, along with a variety of tires, including balloon tires, which allow the base to move through all types of terrain. Corrective steering along with crabbing capabilities enable it to be maneuvered smoothly into places most other chassis cannot go, while the CS Base's built-in bogie track wheels allow the unit to work on track without tire changes. The CS Base incorporates a time-saving quick-release King Pin system which combines a Screw Jack device that allows rapid and simple stabilizing and leveling of the chassis. Quick Release Pins allow fast wheel removal, reducing the operating width to that of the track. The CS Base is lightweight, and can be disassembled manually for ease in transportation. It also comes equipped with a removable center post and tool box for storage.

Chapman/Leonard Studio Equipment, 12950 Raymer St., North Hollywood, CA 91605, (818) 764-4726, FAX (818) 764-2728.

Skate-Wheel Dolly

Camera Support Systems' Minislider Dolly is a 12" x 17" skate-wheel dolly that glides within aluminum channel beams. Because the dolly weighs only 15 pounds and is securely enclosed within the 5" channel beams, the camera can be safely dollied while on a moving conveyance such as a car, boat or train. The Minislider will take a Sachtler, Cartoni, O'Connor or any other brand camera head with a standard Mitchell base.

Tension on the skate wheels can be adjusted to limit the ease with which the dolly can be rolled. A quick-locking brake will hold the dolly at the end of a move, or hold it locked in place when the unit is used for quick-change setups.

The Minislider comes with a set of 4' and 8' beams. The 4' beams allow dolly moves in extremely tight quarters such as a restaurant booth or back seat of an automobile, with room for the operator and assistant. The 8' beams are for longer moves on a process trailer or any moving vehicle, off a balcony or out a window. The beam clamping plates have 1 ¼" speedrail flanges mounted for fast setup time.

Camera Support Systems, 4725 Lagoon Dr., Mound, MN 55364, (612) 474-9246.

Film Cleaning Machine

Lipsner-Smith's CF-3000 MK VI film cleaning machine can use new cleaning agents, an important feature now that methyl chloroform is being phased out of production. In addition to its ultrasonic cleaning, the machine's optionally-engaged submerged rotary buffer system can gently scrub films that may contain hard-to-remove impacted dirt. The unit achieves operation speeds of up to 200 feet per minute, twice the speed of conventional machines, and provides increased solvent recycling efficiency for additional savings in solvent costs and a reduced payback time.

Lipsner-Smith Company, 4700 Chase, Lincolnwood, IL 60646, (708) 677-3000, (800) 323-7520, FAX (708) 677-1311.

Tele-Converter

Century Precision Optics' 1.6X Tele-Converter for video zoom lenses attaches quickly to the front of the zoom, lengthening its focal range in the telephoto direction with no light loss. Depending on the reach required for a particular shooting situation, the Tele-Converter can be used alone or in conjunction with a lens' built-in 2X extender. Adding the 1.6X Tele-Converter to a 15x8 f1.7 zoom alters the working focal length from 8-120mm to 26-384mm, surpassing the 320mm reach of a 20X lens. The combination of a 1.6X Tele-Converter and a 15X internal focus zoom lens offers greater telephoto capability than a 20X zoom lens, yet costs a third less.

Century Precision's optical accessories feature multi-coated glass elements, lightweight aluminum alloy housings, and precision construction.

Century Precision Optics, 10713 Burbank Blvd., North Hollywood, CA 91601, (818) 766-3715, FAX (818) 505-9865.

Turnkey Video Nonlinear Editing Systems

Fast Electronic has introduced the Pentium-based Studio Quad and Video Quad turnkey nonlinear editing solutions, developed in cooperation with Compaq Computer.

Studio Quad, suited for installation in television, broadcast and high-tier postproduction facilities, is housed in a Compaq ProLiant rack-mountable PC. The system includes video machine with digital player/recorder; YUV component option; jog/shuttle; studio control box; dual monitor SVGA card with two 17" monitors; 8GB Conner video storage; CD-ROM; Roland sound card; and Image North Technologies inscriber CG.

Video Quad is an S-Video/Hi8 editing suite designed for corporate A/V departments, animators, educators, and mid-tier posting facilities. Housed in a Compaq ProSignia PC, the system includes: video machine with digital player/recorder; studio control box; one 17" monitor; 4GB Conner Video storage; CD-ROM; Roland sound card; and Image North Technologies Inscriber CG.

The Quad systems' performance engine is the Video Machine Digital Player/Recorder, which delivers 4:2:2 video processing; real-time playback including all digital video effects; audio/video scrubbing; EDL export; machine control for 400+ VTRs; GPI box control; optional support for Pinnacle's Alladin Media Printer (linear mode only); balanced audio connections; 8 channels of CD-quality digital audio; user-selectable Motion JPEG compression (60 fields/second) from online quality (3:1) to offline (200:1); forward and reverse digital slow-motion; auto scene detection; trim function; split monitor option; and open architecture with all Windows applications.

Fast Electronics, 393 Vintage Park Dr., Foster City, CA 94404, (415) 345-3400, FAX (415) 345-3447.

Internet Directory of Film and TV Technicians & Facilities

Mandy's Internet Film & TV Production Directory, found at http://www.mandy.com, gives producers, facilities and technicians worldwide a web home page each to post curriculum vitae. The database, up and running since early 1995, is searchable with key words — try "Steadicam Hong Kong" or "Eurocrew." The Directory site also has area pages, one for each U.S. state, with links to technicians, film/TV facilities and producers. It is globally accessible and up-to-date, and pages are free for three months, then charged per year at $15 (U.S.) for individuals, $20 (U.S.) for companies.

The site is currently adding over 100 pages per month. Interested readers in possession of a Mosaic or Netscape-type viewer should fill in the form on http://www.mandy.com/form.html. Or e-mail a resume or rate card to john@eurocrew.demon.co.uk and they'll create your page.

Mandy's Internet Film & TV Production Directory, Eurocrew Ltd., 7/9 Ferdinand St., London NW1 8ES, England, 44 (0) 171-284 4465, FAX 44 (0) 171-916 4735.

Automated Wash

High End Systems Studio Color automated wash luminaire provides unlimited color selection, dimming, strobe/shutter, variable beam shaping, variable frosting and precision positioning. The MSR 575 source provides over twice the output of a 1000W halogen fixture while consuming only half the power and producing less than one third of the heat.

High End Systems, 2217 West Braker Lane, Austin, TX 78758, (512) 836-2242, FAX (512) 837-5290, http://www.highend.com.

New Filter Colors

The Great American Market has added 21 new colors to their GamColor and CineFilter lines. The new deep-dyed polyester filters include 18 theatrical and three correction filters.

Also new from GamColor is their 1996 Shadow Play 6 Catalog, which introduces 56 new patterns.

The Great American Market, 826 N. Cole Ave., Hollywood, CA 90038, (213) 461-0200, FAX (213) 461-4308.

Mini-Arc Light

Frezzi's new Mini-Arc Light is a miniature HMI, high-output fixture housed in a single, self-contained unit. It draws only 24 watts of power and outputs the equivalent of a 100-watt quartz bulb. One of the smallest HMIs in the world, it has built-in ballast and controls and is available in several configurations such as a Power Tap or NP version, which can use any NP-type battery and provide an hour's worth of light equivalent to 100 watts. Optional accessories include a flip-down dichroic filter corrected to provide 3200°K light for indoor shooting as well as any connector of choice. The unit will provide an operating life of over 500 hours and is easy to replace.

Frezzolini Electronics, 5 Valley Street, Hawthorne, NJ 07506, (201) 427-1160, FAX (201) 427-0934, (800) 345-1030.

Camera Assistant's Handbook

Focal Press' *The Camera Assistant, A Complete Professional Handbook*, by veteran camera assistant Doug Hart, describes all of the important facets and duties of the first and second camera assistants' jobs, from the preproduction equipment checkout through the actual shooting to the equipment wrap. Whether it is feature film, episodic television, documentaries, commercials, or music videos, the book explains both the practice and theory with a concentration on technique rather than equipment.

Key topics include film formats and aspect ratios, testing lenses and camera equipment, focus theory, film loading and labeling, scene blocking,

marking actors, shooting tips, slating, paperwork, equipment maintenance, set etiquette, and finding work. The book is designed as a comprehensive procedures manual which describes and explains the most important responsibilities of the camera assistant on the set, the theory behind the practice and the methods that get the job done properly and keep the assistant frequently employed.

Focal Press, 313 Washington Street, Newton, MA 02158-1626, (617) 928-2500, FAX (617) 928-2620, (800) 366-2665, http://www.bh.com/bh/fp/.

Remote-controlled Video Camera

Sony Electronics' DXC-950 video camera is equipped with a built-in RS-232C interface and can be remotely controlled from an external computer using an eight-pin connector. The camera features Sony's newly-developed Power HAD CCDs, providing higher resolution and signal-to-noise ratio. With Power HAD, less light is needed to illuminate a picture, improving the sensitivity over one f-stop and reducing red streaks caused by bright lights.

The unit's strobe synchronization functions enable the DXC-950 to be easily incorporated into "machine vision" applications for computerized color adjustments and pre-press photo inspections. It also simplifies system integration, resulting in reduced setup costs.

Sony Electronics, (800) 635-SONY.

Digital Film Compositor

4DVision's Digital Fusion compositor features a flexible procedure-based system that interactively flowcharts image function blocks together, achieving complex layering and image manipulation in a single generation. There is no limit to the number of input streams, layers or functions that can be applied to those layers.

Digital Fusion's function parameters are keyframeable with independent channels and bezier spine control. All image function setups are done interactively in real time. Likewise, real-time previews can be generated and viewed, and all live-action and sequences can be spooled through in real time.

The compositor incorporates real-world connections to high-end video

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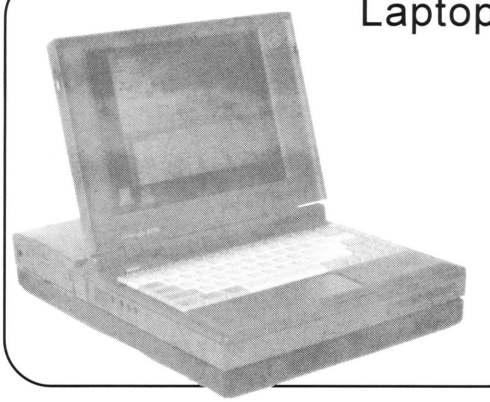

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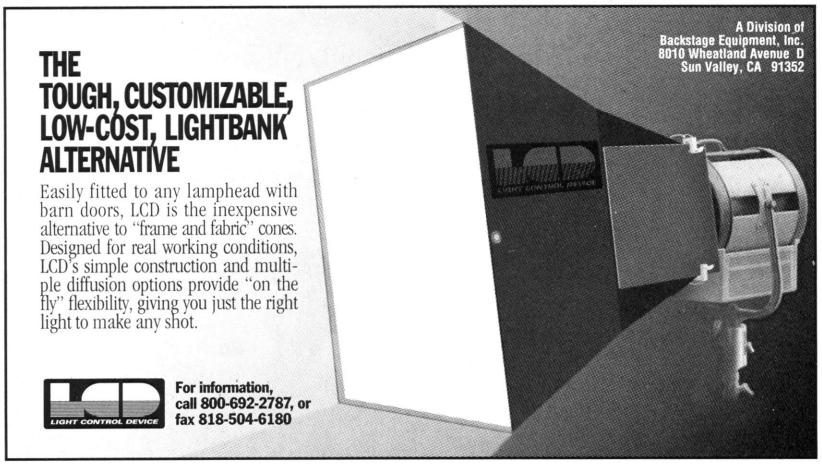
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and film devices, and features direct control, setup and transferring without compromise to digital video disks, digital film recorders, and exabyte drives.

The current configuration of Digital Fusion encompasses a 32-bit protected mode program that supports any VESA compatible Super VGA, 1 MB minimum (2MB preferred), 386 with co-pro 8MB RAM or better, Adaptec 1542 SCSI only, and a mouse. 4DVision's recommendations for video include a top-of-the-line Pentium, 2MB SVGA, 32MB RAM, 17-inch monitor minimum, 4GB SCSI disk, and a video disk.

Key features include image manipulation, merging, filtering and color, booleans, matte generators, color space digital fusion, warping, and image file conversion digital fusion. Power modules encompass Steady, Complete Stabilization, Unsteadying, Automatic Tracking, and In-and-Out full broadcast digital capabilities.

4DVision, 4800 Happy Canyon Road, Suite 250, Denver, CO 80237-1074, (303) 759-1024, (800) 252-1024, FAX (303) 759-0928.

Digital Disk Recorder

Rapid Tech's Vistor 4:2:2 Component Digital Disk Recorder emulates the best functionality of tape machines but leaves behind the undesirable effects associated with linear equipment such as linear access, electro-mechanical transports and long shuttle times. Enclosed in a 19" x 7" rack mount case, the unit is packaged in the space of a single VTR.

The Vistor product line features digital recording of both video and audio onto a hard-disk drive using advanced Motion JPEG algorithms. RS-422-based editors or computer-based control devices may be used to actuate editing or playing. Audio can be recorded either together or at separate times from the video. Compression is accomplished through Motion JPEG onto the Vistor's internal or external hard drive. Rapid Tech has refined this method to record and reproduce near D-1 quality at its lowest compression ratio. A real-time dynamic codec system allows all video transitions and changes to be robustly captured without dropped or missed frames. A 50/60 field-per-second capture is standard for the entire Vistor product line.

The Vistor features NTSC and PAL capability, composite and Y/C inputs/outputs, and 2 16-bit digital audio channels with optional 4:2:2 digital video I/O, and can compress program content from as low as 2.5:1 to 40:1. Real-time control of the unit's performance attributes are selectable from the intuitive onscreen menus. A 9 GB drive can store approximately 30 to 40 minutes of Beta SP-quality program. Vistor's emulation scheme encompasses all popular machines including the Pioneer VDR-1000 LDP and Sony digital Betacam series decks. ID response is adjustable to accommodate unique editors requiring specific returns. The unit is compatible with Rapid Tech's EventMaster, Pinnacle FlashFile/FlashClips and all Videomedia-compatible V-LAN interfaces.

Rapid Technology Corporation, 172 Holtz Drive, Buffalo, NY 14225, (716) 632-2700, FAX (716) 632-9080, dvstevl@buffnet.net.

Filters and Close-up Lenses

The Schneider Corporation of America has introduced its first series of Biermann and Weber (B+W) filters and close-up lenses. The first complete line consists of a professional square (6.6 x 6.6 and 4.4), rectangular (4 x 5.650), and round (Series 9, 4 ½ and 138mm), and includes clear optical flats, UV-haze filters, close-up lenses, corals, polarizers, neutral densities and enhancing filters, feature.

Unlike other filters in the market, the close-up lenses and clear optical flats are made from clear water-white optica glass and feature a hard anti-reflective coating.

All Schneider B+W glass filters are ground and polished for flatness and parallel thickness and exceed military specifications.

Schneider Corporation of America, 400 Crossways Park Drive, Woodbury, NY 11797, (516) 496-8500.

Ultracompact Camcorder

Panasonic's AG-EZ1U DV-Cam, a digital video format 3-CCD digital signal processing camcorder that weighs less than 2.4 pounds, will record one hour of digital component video on a miniature DAT-sized ¼-inch (6.35mm) cassette.

The handheld camcorder features three ⅓-inch IT CCDs to produce 500 lines of horizontal resolution, a signal-to-noise ratio of 54dB, and minimum illumination of 5 lux, and draws only 7.5 watts of power. Tapes recorded in the DV format can be played by DVCPRO studio VTRs with the optional AJ-CS750 adaptor, facilitating the use of DV footage in professional applications.

The camcorder features a large, adjustable 180,000-pixel color viewfinder; digital electronic stabilization; a 10:1 optical and 20X digital electronic zoom (adjustable in four speeds — 3.5 seconds to 15 seconds); built-in SMPTE time code generator; three-dimensional digital noise reduction; a 14-step electronic shutter (1/60th sec. to 1/8000 sec.) to record fast-moving subjects; 4-step manual gain-up; 16:9 wide aspect ratio recording capability; Y/C and composite outputs; auto white balance and black balance; 5-pin control; and stereo audio output. A stereo microphone is built-in; the AG-EZ1U also accepts external microphones. The DV camcorder uses a newly-developed metal evaporated tape, available in 30-minute and 60-minute lengths.

The camcorder's Macro function permits close-up focusing down to a minimum distance of 1.5 inches. The user has manual control over iris, white balance, shutter speed and backlighting. The unit has a Digital Still Shot function that allows recording of crisp still images, such as maps and graphics, for about six seconds, while audio continues as normal. A total of 290 still images can be recorded on a single 30-minute tape, and 580 pictures on a 60-minute tape.

The system features an external 7.2 volt battery; car battery charger; cassette adaptor that allows a mini-DV cassette to playback in a DVCPRO VTR; soft carrying case; a one-year warranty on parts and labor; and 800-number technical support.

Panasonic, (201) 392-4319, FAX (201) 392-6001.

Rendering and Animation for Windows

Lightscape Technologies' Lightscape Visualization System for Windows NT is a rendering application offering advanced radiosity technology combined with user-specified physically-based lighting and an integrated ray tracer. Lightscape's radiosity technology accurately simulates the interaction of

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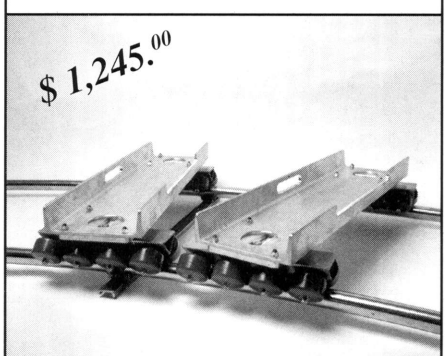

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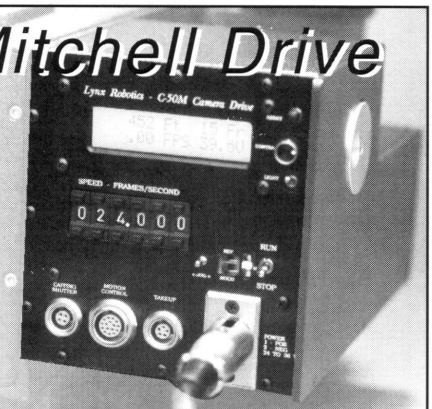

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light among surfaces in a model, producing significant lighting effects such as indirect illumination, soft shadows and color bleeding. In addition, radiosity precalculates the lighting of a scene and stores this information as part of the 3-D model so that users can interactively display a fully-rendered image from any point of view. Users can make changes on the fly and adjust lighting and material combinations throughout the rendering process.

A variety of industry-standard lighting formats, such as IES, are supported. Virtual prototyping with Lightscape can provide designers meaningful information early in the design process and shorten the design cycle by reducing the need for physical prototyping.

Using Lightscape's integrated animation tools, high-quality frames for film or video can be rendered in a fraction of the time required with traditional techniques. Lightscape's output can also be exported for use in real-time virtual reality applications as well as VRML and Quicktime VR applications. The software was recently used by Matte World Digital to re-create the 1970s Las Vegas Strip in *Casino*.

A Pentium-based personal computer with 32-64 MB of RAM is recommended. Lightscape supports OpenGL compliant 3-D accelerator boards, and takes advantage of the enhanced 32-bit and floating point performance of the Pentium Pro processor. The software imports Autodesk 3-D Studio 3DS files as well as DXF files.

Lightscape Technologies, 1054 Saratoga-Sunnyvale Road, San Jose, CA 95129, (408) 342-1900, FAX (408) 342-1910.

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Aluminum High Tech's All-Aluminum Tailgate Loader is designed to support loads from 700 to 7000 pounds and fits Class 3 through Class 7 trucks and trailers. The Loader is 40% lighter than those made of other materials, and features electrical hose burst valves, lockable control box, remote controls, large platform, safety loading system, automatic leveling, in-use warning lights, and rollstops for carts.

Aluminum High Tech Products, 2821 Bettis Court, Marietta, GA 30066, (770) 971-1668, FAX (770) 971-0416.

The Road to Cairo's 19th Annual Film Festival

by Brooke Comer

A city of intoxicating beauty topped off with an air of exotic mystery, Cairo once again provided ideal settings for its 19th International Film Festival in December. Filmmakers from around the world took time to check out both films and sights — from the walled city of Old Cairo to the marketplace of Khan El Kalili and the Gezirah Sheraton, where festival guests had a view of the Nile. In addition to Egyptian movies, films from America, Brazil, Mali, Tunisia, Italy, France, China, Japan, Sweden, Spain, Germany, Poland, Syria, and other countries were screened in participating theaters around town.

Saad Ed-Din Wahba, president of the event, praised the multicultural influences that lent diversity to the festival. "In spite of the negative results of the collapse of the Soviet Union," said Wahba, "the shake-up in the Eastern Bloc has had important ramifications on international cinema. Private production has allowed a new generation of filmmakers to reveal their social identity, their cultural inheritance and their personal issues, free from governmental control." Wahba has noted an influx of films from Azerbaijan, the Ukraine, Croatia, Slovenia, Armenia, the Czech Republic, Slovakia and Bosnia. "These productions have a special flavor," he explained, "distinguished by originality and the desire to maintain a unique consistency."

Ukrainian director Sergei Masloboischikov won the Best Director award for *Josephine, the Singer, and the Mice People*, his film based on short stories by Franz Kafka. Described by the filmmaker as "a documentary from an imaginary world," the mesmerizing story, which featured strong cinematography by Alexander Shumovich, put both the Ukraine and Masloboischkov on the map.

Other films mirrored the lives of Arabic people in the Nineties. *The Tale of Three Jewels,* written and directed by Michel Khleifi and photographed by Raymond Fromont, is a love story about two children during the last days of the Israeli occupation of Palestine. Yussef, a 12-year-old Palestinian, lives alone with his mother and sister while his father is in prison and his brother is a fugitive from the Israeli army. His life is shaped by the violence and repression he must endure, yet he finds escape through imagination and love.

Wolfgang Panzer's Swiss entry, *Broken Silence*, which he shot with cinematographer Edwin Horak, tells the story of a Carthusian monk committed to silence and meditation for 25 years. While on a mission into Indonesia to negotiate the lease of his cloister, he meets a young African-American girl, and the two develop a relationship that changes the monk forever.

Swedish director Kristian Petri's *Between Summers* follows a year in the life of Torun, a wife and mother from Stockholm who spends the summer holidays by the Danish Atlantic coast with her two children and sister. While Torun is napping, one of her boys drowns in the surf. After returning home, she is unable to grieve for her lost child. Her husband Mikael surprises her by offering support instead of the blame she expects. Instead, she finds her punishment elsewhere, in self-destructive, physical relationships with other men. Her marriage disintegrates as fall turns to winter. But with spring comes healing, and by summer Torun and Mikael are reconciled. The family returns to the coast, where the seaside looks exactly the same.

In Haroutium Katchatrian's *Last Station*, politics in the director's native Armenia comes under scrutiny.

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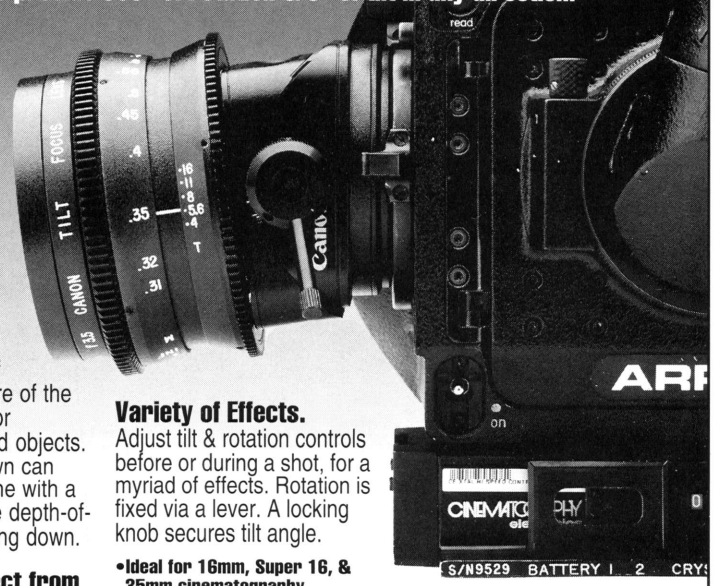

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The country's political independence becomes a factor in this story of lost love and broken dreams. Gerald, an Armenian-born American actor, reminisces about his travels around the world with his wife Nora. During their journeys, the couple performs a play about their country's identity and their own sense of belonging. Ultimately, the play becomes a platform from which they express their own feelings of marginality, isolation and alienation. Gerald seeks a homeland, but Nora wants no such attachment. When their tour takes them to their newly independent country, Gerald must face the truth of his impoverished homeland. The tour has come to an end and this is the last stop. Will one stay and the other remain? Is this their last performance?

American filmmaker Bob Balaban's feature *The Last Good Time*, shot by cinematographer Claudia Raschke (covered in *AC* May 1995), also appeared in the festival, telling the story of an older man, a younger woman, and one night of romance.

Egypt's Minister of Culture, Farouk Hosny, explained that the Cairo International Film Festival is one of a series of artistic celebrations organized under the patronage of his agency. "The festivals are created as a means of keeping Egyptians acquainted with any new trends in the artistic field," he said, pointing to the music, folk arts, experimental theater and documentary film events held in the past year.

"The Egyptian artist was never a spectator or a passive receiver," Hosny added. "We believe that the Cairo Film Festival has a common bond with the National Festival for Feature Films: both have a common goal, to find a driving force that helps Egyptian cinema regain its glory, to promote creativity and modern production, and to pave the way toward creative thinking, away from the philosophy of marketing." He adds that "there is no doubt that this is one of the leading events that add to the rise of Egyptian culture."

Next year's films, which will mark the Festival's 20th Anniversary, will be even more diverse, according to Wahba. "1996 will be very special," the president predicted. "We hope to have more entrants from a variety of countries. And we hope to have more American films."

Books in Review

by George Turner

Hard-Boiled
by Peggy Thompson and Saeko Usukawa
Chronicle, 124 pps., paper, $14.95

Subtitled "Great Lines from Classic Noir Films," this is basically a collection of film stills and posters surrounded by about 300 pieces of dialogue culled from the represented pictures. So described, it sounds like one of those "non-books" that pop up here and there. Actually though, it's a good volume to have around. For one thing, it boasts a classy print job, with excellent photo reproduction. And the selected quotes are often memorable; when combined with the photos, they conjure up fond recollections of their sources.

One can almost hear Robert Mitchum saying, "I was just getting ready to take my tie off, wondering if I should hang myself with it," in *His Kind of Woman.* And John Dall telling Peggy Cummins in *Gun Crazy:* "We go together, Laurie. I don't know why. Maybe like guns and ammunition go together." Or Rita Hayworth in *Gilda* telling Glenn Ford, "If I'd been a ranch they'd have named me the Bar Nothing." One can even remember the special growl Edward G. Robinson gave to lines like this from *Woman in the Window:* "There are only three ways to deal with a blackmailer. You can pay him and pay him and pay him until you're penniless. Or you can call the police yourself and let your secret be known to the world. Or you can kill him."

In a Door, into a Fight, Out a Door, into a Chase
by William Witney
McFarland, 272 pps., library binding, $29.95

Don't bother looking for William Witney's name in the pantheon of directorial giants. He never rubbed shoulders with Griffith, Capra, Godard or Renoir and never saw his name tugged out of a Price-Waterhouse envelope. His film school was Nat Levine's Poverty Row serial factory, Mascot Pictures, where 25 finished reels were put in the can for $40,000. His graduate work was done in the serial unit at Republic, and his mature years were devoted to making Roy Rogers musical westerns, program features and TV series.

Yet some of us rank Witney among the great creative geniuses of the cinema. We're the ones who grew up watching the cliffhangers one chapter at a time every Saturday (thus making another week of school drudgery bearable) and who still find in these filmic fugues a source of wonder. Witney directed or co-directed 23 of the best of these before his 29th birthday. In his brief but insightful foreword, Francis M. Nevins states our case for Witney perfectly: "He's the Hitchcock of the pure action film."

Witney was born in Oklahoma in 1915 and learned about movies from the ground up, starting as an office boy at Mascot in 1933. He stayed with the studio as script clerk and film editor when it became the home of Republic Pictures. In 1937 he went on location in Utah for *The Painted Stallion,* co-directed by Alan James and Ray Taylor. Taylor quickly drank himself out of a job; the baby-faced editor unwillingly took over for a day and stayed on to finish the picture. Serials, it should be noted, usually had two directors working and preparing on alternate days. Witney and James then were teamed for *S-O-S Coast Guard,* whose leading lady, Maxine Doyle, became Witney's wife.

These were fine serials, and so were many to come, especially *The Lone Ranger, The Fighting Devil Dogs, Hawk of the Wilderness,* three *Dick Tracy* serials, *Daredevils of the Red Circle, Zorro's Fighting Legion, Drums of Fu Manchu, Adventures of Captain Marvel, Jungle Girl,* and *Spy Smasher.* A few were directed by Witney alone, but in most he was teamed with the late John English, another master of the form. →

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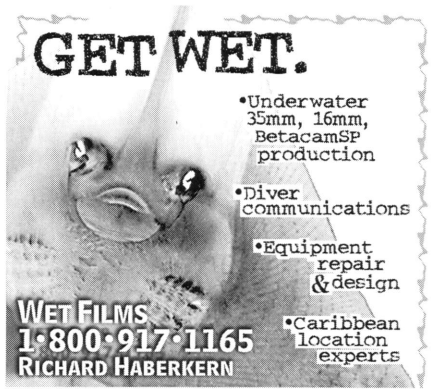

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The book is filled with good anecdotes about friends and foes among the stuntmen, cinematographers, technicians and performers in the curiously segregated serial world. Witney makes no bones about separating the good guys from the bad guys. Unfortunately, some poor proofreading gives a few of them variant name spellings.

The windup, appropriately, is a cliffhanger: when World War II arrives, Witney finishes his last serial and joins the Marines. Another long chapter is in order.

Woody Allen
on Woody Allen
In Conversation with
Stig Bjorkman
Grove, 288 pps., paper, $12

So often has Woody Allen portrayed himself on film as a neurotic, self-pitying hypochondriac that one tends to assume he is just that. Some personal problems that have dragged him into a pitiless spotlight seem to fortify such a view. However, the portrait that emerges from this series of in-depth interviews reveals a much different man: a dedicated, hard-working, well-disciplined filmmaker.

Allen began as a comedy performer — a highly original one — and many of us who loved his comic sense groaned when he began to show signs of being the clown who wanted to play Hamlet. As a writer-director he soon proved that he was equally a master of both drama and comedy.

These interviews concentrate on his films and how they came about, rather than his personal life. Bravo for that: we've had so much scandal mongering in recent showbiz biographies that the movie business tends to become little more than a footnote. Here we have a skilled professional talking about the inspirations and philosophies that give impetus to his work, and about the many problems of making a movie. We gain insights not only into his own ideas and methods, but also those of his collaborators. His cinematographers come in for considerable attention, and we get some interesting anecdotes about Gordon Willis, ASC; Ghislain Cloquet, Sven Nykvist, ASC; Carlo Di Palma, AIC and Allen's frequent writing partner, Marshall Brickman.

Bjorkman has done a good job of keeping things in perspective.

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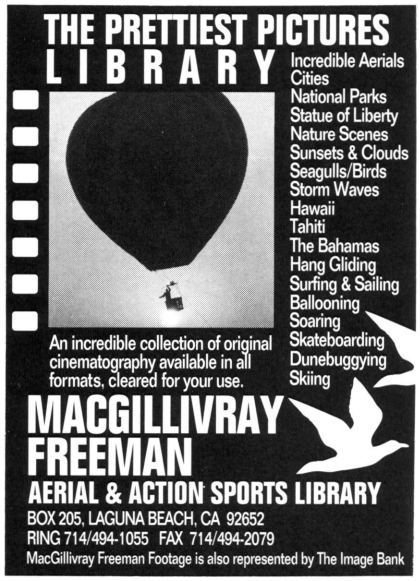

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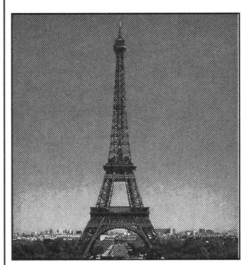

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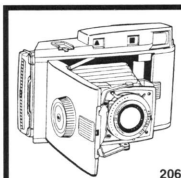

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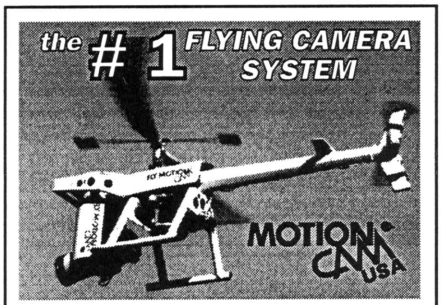

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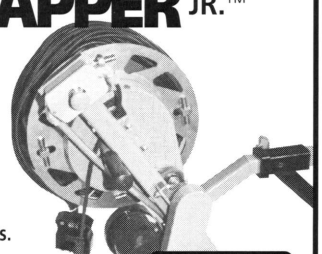

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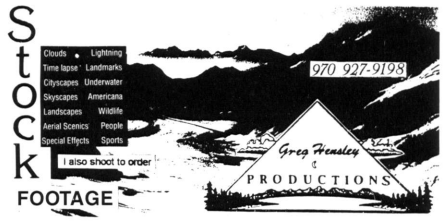

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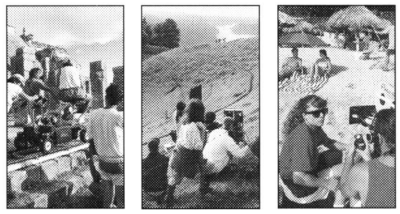

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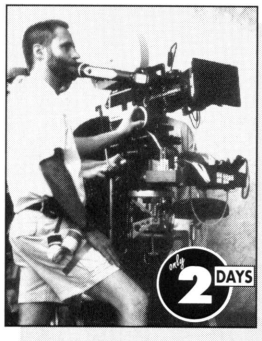

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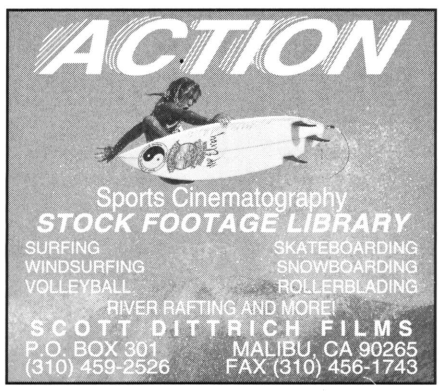

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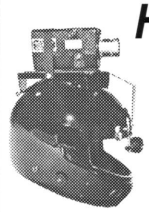

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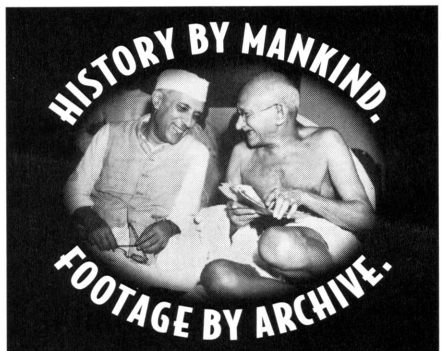

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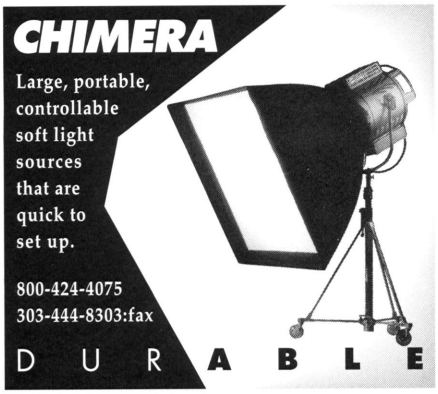

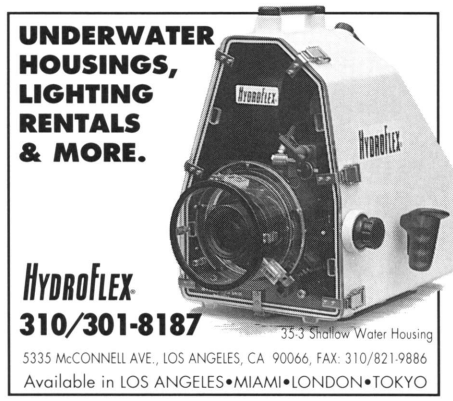
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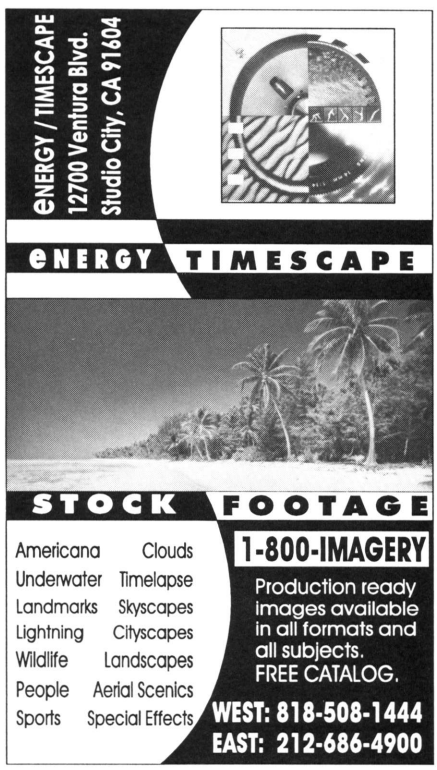

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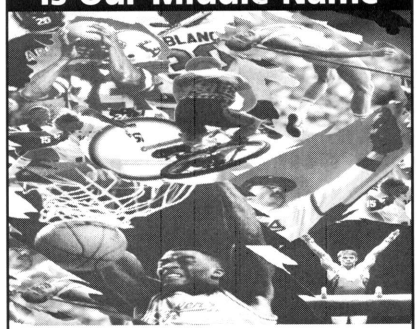
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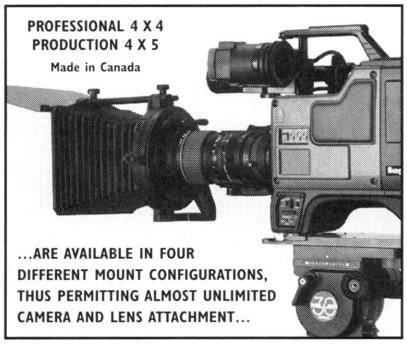

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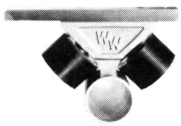

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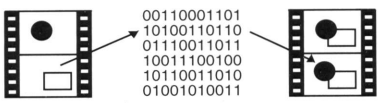

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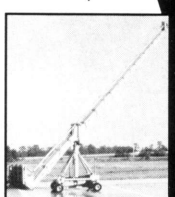

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From the Clubhouse

Stanley Cortez, Linwood Dunn and Conrad Hall, longtime ASC members who have brought luster to their profession, reminisced about their careers at a special history-themed dinner meeting on November 27. Stephen Burum, ASC hosted the program, with film historians Rudy Behlmer and George Turner serving as moderators.

Dunn described his sometimes comical adventures as a youthful assistant cameraman on Pathé serials in New York in the 1920s, and of his role in the evolution of optical effects into a fine art. His talk was accompanied by film clips of highlights from *Bringing up Baby, Citizen Kane, It's a Mad, Mad, Mad World* and other milestones in visual effects cinematography.

Cortez, who also entered the field at Pathé, recalled his work in many important films, including Orson Welles' *The Magnificent Ambersons* and Charles Laughton's *Night of the Hunter.* A highlight of his presentation was a screening of scenes from Cortez's exclusive coverage of the Casablanca and Yalta conferences with Roosevelt, Churchill, Stalin and other world leaders at the climax of World War II.

Hall screened sequences from his black-and-white classic *Morituri,* including remarkable scenes made in the claustrophobic interior of a ship. In addition to describing working methods and production problems, he spoke eloquently about why he believes some films have a lasting significance while others are ephemeral — and included even some of his own finest work in the "doesn't hold up" category.

A full-house audience attended the event.

❧❧❧

Michael Negrin is the latest member to join the ASC. The son of Sol Negrin, ASC, he began visiting his father at work by the age of eight, when the senior Negrin was operator on *The Patty Duke Show* in New York. He started an apprenticeship of sorts at 13 when his father's assistants taught him to load magazines.

Negrin graduated from New York University in 1978. Influenced by his father's work on early rock music films such as *Concert for Bangladesh* and John Lennon's "One to One" stereo simulcast, Negrin found work shooting music promos for Billy Joel, several years before the advent of MTV.

While continuing to operate for his father and others on movies of the week and episodic television, Negrin began working extensively in music videos, which he found a natural training ground for feature work due to their very narrative form. He gradually began shooting a greater mix of commercials as well, and in 1987 shot his first feature, the low-budget film *Touch of a Stranger,* whose director chose him because of his work on Billy Joel's "Uptown Girl" video. In 1993 Negrin "went through the ritual" of shooting a Roger Corman feature, *Saturday Night Special,* for Showtime. He also photographed his first hour-long documentary/concert, *Billy Joel: In the Spotlight,* for PBS.

In 1994 he traveled to Hong Kong, Amsterdam, and Zagreb, Croatia to shoot *Night Watch,* an action-adventure film starring Pierce Brosnan. He is currently working on *Diagnosis: Murder* for CBS.

❧❧❧

Brianne Murphy, ASC has been appointed President of Columbia College-Hollywood. Murphy, one of the founders of Women in Film, a co-founder of the TV technician's union, NABET, and the first female member of the ASC, is currently director of photography on *The Louie Show.*

❧❧❧

The ASC's East Coast contingency has launched a series of meetings in New York City. Sponsored by Eastman Kodak Company's Motion Picture and Television Imaging division, the first dinner meeting brought together ASC members — including Michael Ballhaus, Ernest Dickerson, Victor Kemper, and Sol Negrin — vendors and union representatives in the hopes that the group will continue to expand. Also present were Ira Tiffen and Arriflex president and ASC associate member Volker Bahnemann.

❧❧❧

ASC associate member and British Film Commissioner Sir Sydney Samuelson, CBE, is the second recipient of an Honorary Life Fellowship from Britain's Moving Image Society. The first was presented to Freddie Young, OBE, last year. Mr. Samuelson was also knighted by the queen in a November ceremony at Buckingham palace for services to the British film industry. ❧

A memorial service was held on December 10 at the ASC Clubhouse for John L. (Scott) Robertson, a veteran Eastman Kodak sales and marketing executive who died on December 2 at age 75.

Born in Johnson City, New York, Robertson enrolled at 18 in the Agfa ANSCO film testing and sales training program in Binghamton, New York. In 1941 he graduated from the U.S. Naval Photographic School; it was during his Navy service that he developed skills in photo interpretation, aerial mapping and training film production. He continued his association with the armed forces as a lieutenant in the U.S. Naval Reserve.

After leaving the Navy in 1945, Robertson began working for the Bell & Howell Company, and in 1957 he joined Eastman Kodak. After his retirement in 1993 he continued his associations with the ASC, SMPTE, and the American Film Institute.

His family suggests that in lieu of flowers, donations be made in his name to the American Heart Association. ❧

Films Chosen for Library of Congress National Film Registry

The Library of Congress has selected 25 motion pictures for the National Film Registry, a list established by Congress' Film Preservation Act of 1988 for preservation in the National Film Collection of the Library of Congress. The Registry, now numbering 175 entries, was created in response to increasing concern about the protection and preservation of motion pictures — as approximately half of the movies made before 1950 have deteriorated beyond repair. The Library of Congress endeavors to obtain and maintain an archival-quality original version of each of the chosen films.

The choices have been made by the Librarian of Congress, following consultation with the National Film Board, critics, historians, the public, the staff of the Library's Motion Picture, Broadcasting and Recorded Sound Division, and several industry organizations including the Screen Director's Guild and the ASC. The choices are not intended to be a list of "best" films, but are selected as being "culturally, historically or aesthetically significant." A film is not eligible for consideration until at least ten years after its initial release.

The films and their cinematographers are:

The Adventures of Robin Hood
Tony Gaudio, ASC, Sol Polito, ASC, W. Howard Greene, ASC
Warner Bros/First National, 1938, Technicolor

All That Heaven Allows
Russell Metty, ASC
Universal, 1955, Technicolor

American Grafitti
Haskell Wexler, ASC, Ron Eveslage, Jan D'Alquen
Universal, 1973, Technicolor

The Band Wagon
Harry Jackson, ASC
MGM, 1953, Technicolor

Blacksmith Scene
Edison, 1893, silent short

Cabaret
Geoffrey Unsworth
Allied Artists, 1972, Technicolor

Chan is Missing
Michael Chin
Wayne Wang, 1982, black-and-white

The Conversation
Bill Butler, ASC
Paramount, 1974, Technicolor

The Day the Earth Stood Still
Leo Tover, ASC
Fox, 1951, black-and-white

El Norte
James Glennon, ASC
Independent Productions/Cinecom-Island Alive, 1983, color

Fatty's Tintype Tangle
Keystone Film Company/Mutual Film Corporation, 1915, silent

The Four Horsemen of the Apocalypse
John Seitz, ASC
MGM, 1921, silent with musical accompaniment

Fury
Joseph Ruttenberg, ASC
MGM, 1936, black-and-white

Gerald McBoing Boing
UPA/Columbia, 1951, animated short

The Hospital
Victor Kemper, ASC
United Artists, 1971, color

Jammin' the Blues
Robert Burks, ASC
Vitaphone, Warner Bros., 1944, black-and-white short

The Last of the Mohicans
Philip R. DuBois, Charles Van Enger, ASC
Tourneur Prod./Associated Prod., Inc., 1920, silent

Manhatta
director/cinematographers: Paul Strand and Charles Sheeler
Strand/Sheeler, 1921, silent

North by Northwest
Robert Burks, ASC
MGM, 1959, Technicolor

The Philadelphia Story
Joseph Ruttenberg, ASC
MGM, 1940, black-and-white

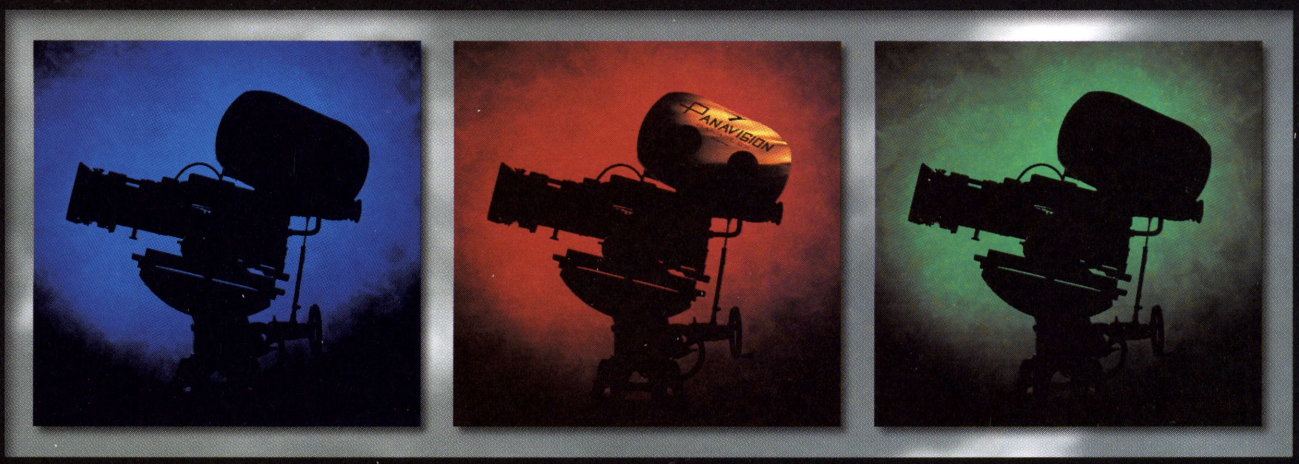
Rip Van Winkle
American Mutoscope and Biograph Co., 1896, silent

Seventh Heaven
Ernest Palmer, ASC, Joseph A. Valentine, ASC
Fox, 1927, silent with music score

Stagecoach
Bert Glennon, ASC
Walter Wanger, United Artists, 1939, black-and-white

To Fly
Producers/directors: Greg MacGillivray and Jim Freeman
1976, Imax motion picture

To Kill a Mockingbird
Russell Harlan, ASC
Universal, 1962, black-and-white



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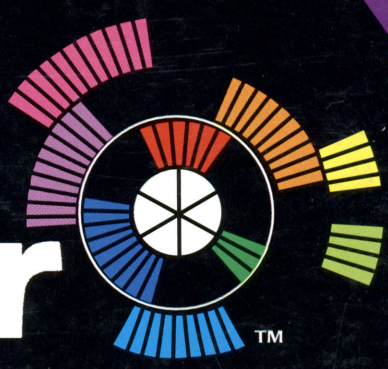

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